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=> fil reg
FILE 'REGISTRY' ENTERED AT 14:39:22 ON 26 DEC 2007
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STRUCTURE FILE UPDATES:   25 DEC 2007  HIGHEST RN 959463-53-7
DICTIONARY FILE UPDATES:  25 DEC 2007  HIGHEST RN 959463-53-7

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TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

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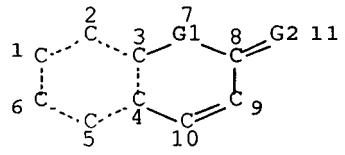

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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
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STEREO ATTRIBUTES: NONE
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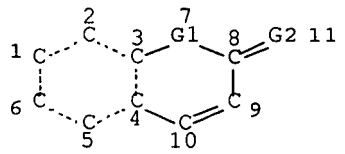

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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
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NUMBER OF NODES IS  11

STEREO ATTRIBUTES: NONE
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100.0% PROCESSED  183688 ITERATIONS                      141386 ANSWERS
SEARCH TIME: 00.00.01


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                 SEL RN

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                 OR 852994-52-6/BI OR 852994-53-7/BI OR 852994-54-8/BI)
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L19              QUE ABB=ON  PLU=ON  MONOMER? OR PRECURSOR?
L20           25 SEA ABB=ON  PLU=ON  L18 AND L19
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L24          18 SEA ABB=ON  PLU=ON  L21 NOT L22


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FILE COVERS 1907 - 26 Dec 2007  VOL 147 ISS 26
FILE LAST UPDATED: 25 Dec 2007  (20071225/ED)

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 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> d l22 ibib abs hitstr hitind 1-20

L22  ANSWER 1 OF 20  HCAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:         2007:788631  HCAPLUS  Full-text
DOCUMENT NUMBER:          147:197339
TITLE:                    Conjugates of cytotoxic agents and
                          dendrimers chain-extended with linear polymers
INVENTOR(S):              Nilsson, Rune; Sandberg, Bengt; Wilbur, Scott
PATENT ASSIGNEE(S):       Mitra Medical AB, Swed.
SOURCE:                   PCT Int. Appl., 61pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.        DATE
     ---------------      ----   --------    --------------------
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     WO 2007080114         A2    20070719    WO 2007-EP209
                                                                   200701
                                                                   11
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             GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE,
             KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY,
             MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM,
             PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV,
             SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM,
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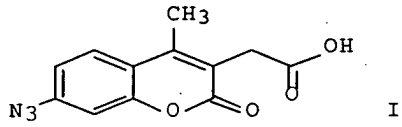
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: US 2006-758025P P 200601 11

GI



I

AB The invention relates to a macromol. comprising (a) a polymer central core having ≥2 atoms to which ≥2 **monomers** are attached forming a dendritic structure comprising ≥3 polymer bonds, (b) ≥3 linear polymers being bond to said polymer bonds, wherein said polymers (b) at least have terminal functional groups for cytotoxic agents, and (c) at least on extended polymer having a size of ≥1 carbon atom longer than said polymers (b) and at least a terminal functional group for a targeting agent. The invention also relates to a **conjugates** of of this macromol. with biotin as the affinity ligand and **conjugates** of the resulting product with cytotoxic agents for therapeutic uses. A typical biotin **conjugate** was manufactured by reaction of bis(2,3,5,6-tetrafluorophenyl) 5-(tert-butoxycarbonylamino)isophthalate with tert-Bu N-[3-[2-[2-(3-aminopropoxy)ethoxy]ethoxy]propyl]carbamate, reaction of the intermediate with N-[1-[3-[2-[2-(3-aminopropoxy)ethoxy]ethoxy]propylaminocarbonyl]ethyl]amide of biotin, reaction of the 2nd intermediate with TFA, reaction of the di-TFA salt of the 3rd intermediate with azide I, reaction of the 4th intermediate with thiocarbonyl diimidazole, reaction of the 5th intermediate with polyethylene glycol 2-aminoethyl 2-carboxylethyl ether, reaction of the 6th intermediate with 2,3,5,6- tetrafluorophenyl trifluoroacetate, and reaction of the 7th intermediate with generation 2 of PAMAM dendrimer, reaction of the 8th intermediate with polyethylene glycol 2-(tert- butoxycarbonylamino)ethyl 2-(2,3,5,6-tetrafluorophenoxycarbonyl)ethy l ether, removal of the tert-butoxycarbonyl protective groups from the 9th intermediate, and reaction of the 10th intermediate with 2,3,5,6-tetrafluorophenyl 4-[2-(tert-butoxycarbonyl)hydrazinocarbony l]benzoate.

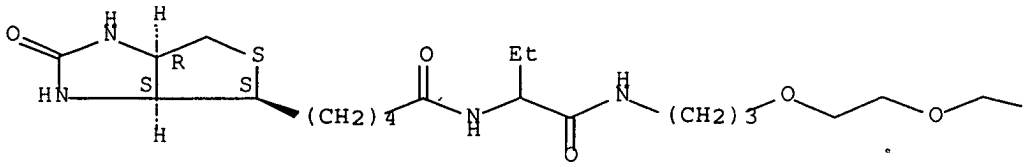
IT **944251-13-2P 944251-14-3P 944251-15-4P**
944251-16-5P
RL: **IMF (Industrial manufacture)**; RCT (Reactant);
PREP (Preparation); **RACT (Reactant or reagent)**
(**precursor**; **conjugates** of cytotoxic agents
and dendrimers chain-extended with linear polymers)

RN 944251-13-2 HCAPLUS

CN 1,3-Benzenedicarboxamide, 5-amino-N1-[16-(7-azido-4-methyl-2-oxo-2H-1-benzopyran-3-yl)-15-oxo-4,7,10-trioxa-14-azahexadec-1-yl]-N3-[16-ethyl-22-(hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl)-15,18-dioxo-4,7,10-trioxa-14,17-diazadocos-1-yl]- (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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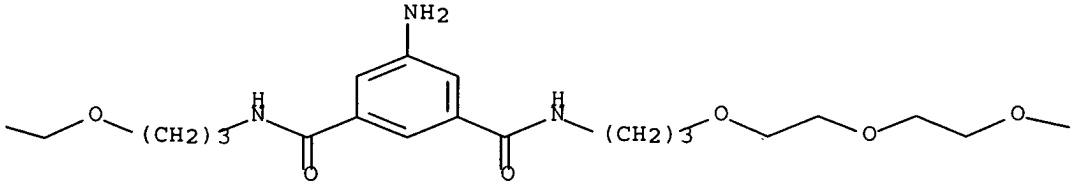

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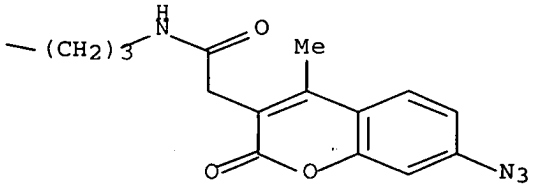
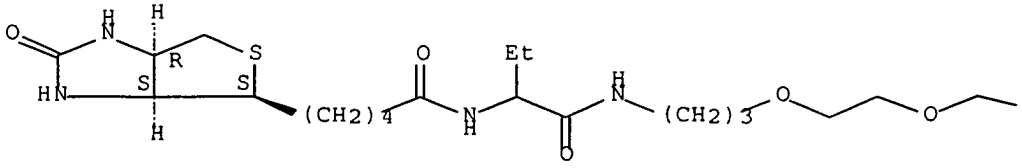


RN 944251-14-3 HCAPLUS

CN 1,3-Benzenedicarboxamide, N1-[16-(7-azido-4-methyl-2-oxo-2H-1-benzopyran-3-yl)-15-oxo-4,7,10-trioxa-14-azahexadec-1-yl]-N3-[16-ethyl-22-(hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl)-15,18-dioxo-4,7,10-trioxa-14,17-diazadocos-1-yl]-5-isothiocyanato- (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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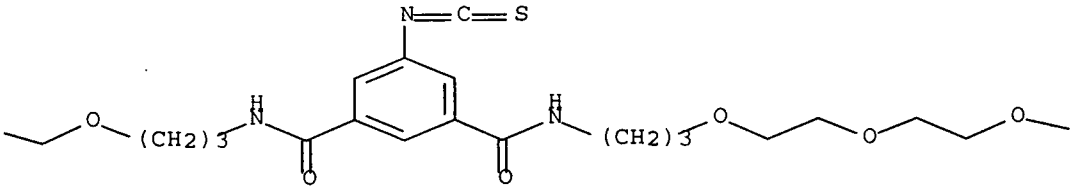

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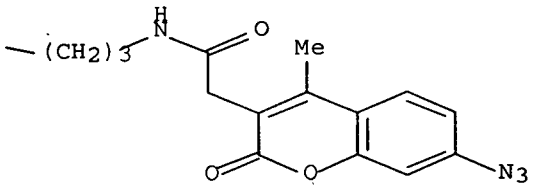

RN 944251-15-4 HCAPLUS

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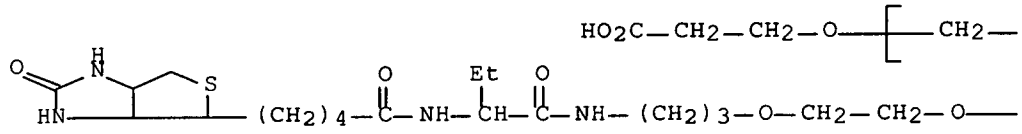
PAGE 1-A



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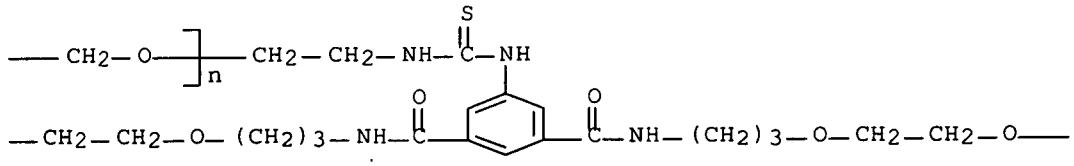

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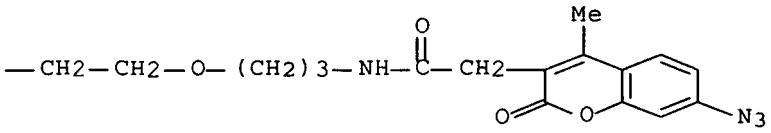
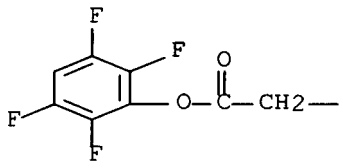
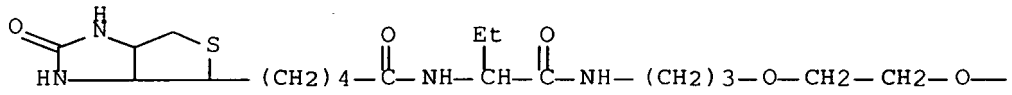


RN 944251-16-5 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α-[2-[[[[3-[18-(7-azido-4-methyl-2-oxo-2H-1-benzopyran-3-yl)-1,17-dioxo-6,9,12-trioxa-2,16-diazaoctadec-1-yl]-5-[18-ethyl-24-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-1,17,20-trioxo-6,9,12-trioxa-2,16,19-triazatetracos-1-yl]phenyl]amino]thioxomethyl]amino]ethyl]-ω-[3-oxo-3-(2,3,5,6-tetrafluorophenoxy)propoxy]- (CA INDEX NAME)

PAGE 1-A





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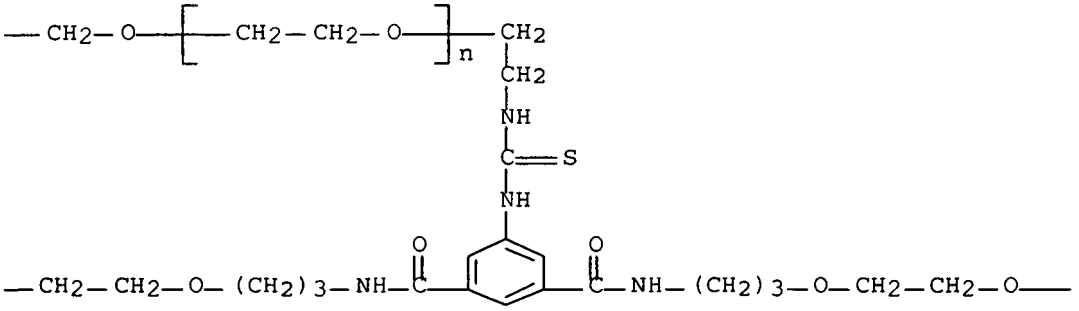

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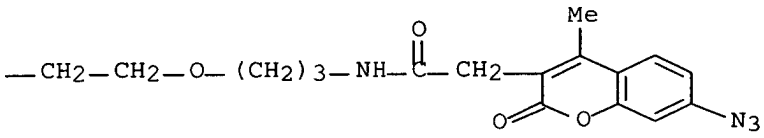
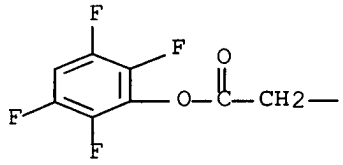


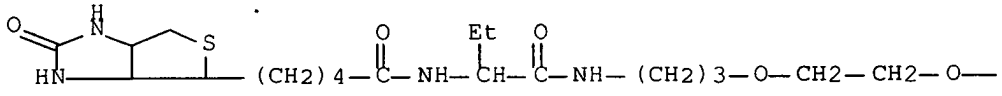
IT **944251-16-5DP**, reaction products with PAMAM and cytotoxins
RL: **IMF (Industrial manufacture)**; THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(**precursor**; **conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

RN 944251-16-5 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α-[2-[[[[3-[18-(7-azido-4-methyl-2-oxo-2H-1-benzopyran-3-yl)-1,17-dioxo-6,9,12-trioxa-2,16-diazaoctadec-1-yl]-5-[18-ethyl-24-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-1,17,20-trioxo-6,9,12-trioxa-2,16,19-triazatetracos-1-yl]phenyl]amino]thioxomethyl]amino]ethyl]-ω-[3-oxo-3-(2,3,5,6-tetrafluorophenoxy)propoxy]- (CA INDEX NAME)

PAGE 1-A





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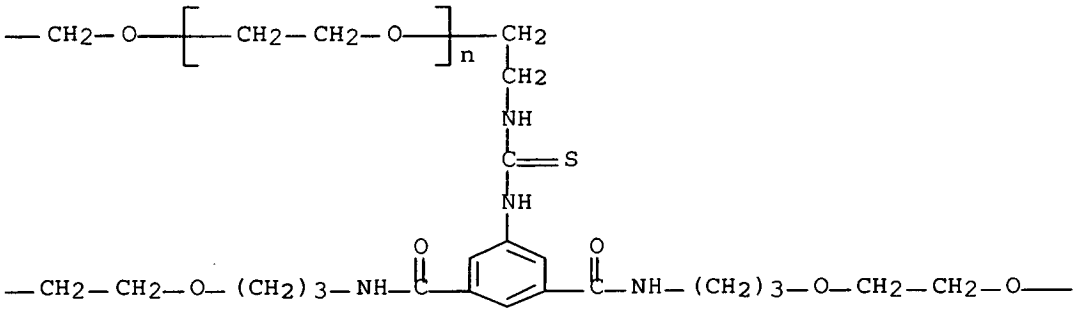

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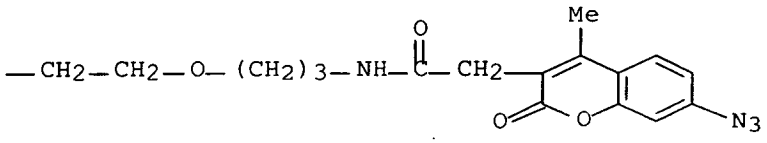

IT **944251-12-1**
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(precursor; conjugates of cytotoxic agents
and dendrimers chain-extended with linear polymers)
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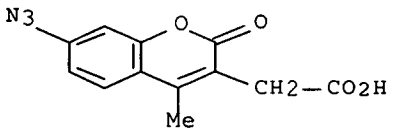

CC 63-6 (Pharmaceuticals)
ST cytotoxin **conjugate** linear polymer extended dendrimer prodrug; polyoxyethylene extended PAMAM dendrimer biotin adduct prepn

IT Ribosome-inactivating proteins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(PAP (pokeweed antiviral protein), reaction products, with dendrimers chain-extended with linear polymers; **conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

IT Antitumor agents
Human
(**conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

IT Polyoxyalkylenes, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

IT Polyamines
RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(dendrimers, reaction products, with and linear polymers and cytotoxins; **conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

IT Toxins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(diphtheria, reaction products, with dendrimers chain-extended with linear polymers; **conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

IT Macrolides
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(epothilones, reaction products, with dendrimers chain-extended with linear polymers; **conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

IT Polyesters, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lactic acid-based, reaction products, with dendrimers and cytotoxins; **conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

IT Peptides, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(metallo, reaction products, with dendrimers chain-extended with linear polymers; **conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

IT Polyamides, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(poly(amino acids), reaction products, with dendrimers and cytotoxins; **conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

IT Polyamines
RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polyamide-, dendrimers, reaction products, with polyethylene glycol derivs. and cytotoxins; **conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

IT Dendrimers
RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polyamide-polyamines, reaction products, with polyethylene glycol derivs. and cytotoxins; **conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

IT Polyamides, biological studies
RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(polyamine-, dendrimers, reaction products, with polyethylene glycol derivs. and cytotoxins; **conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

IT Dendrimers
RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polyamines, reaction products, with and linear polymers and cytotoxins; **conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

IT Drug delivery systems
(prodrugs; **conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

IT Peptides, biological studies
Polysaccharides, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(reaction products, with dendrimers and cytotoxins; **conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

IT Abrins
Mycotoxins
Radionuclides, biological studies
Ribosome-inactivating proteins
Ricins
Toxins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(reaction products, with dendrimers chain-extended with linear polymers; **conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

IT Toxins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tetanus, reaction products, with dendrimers chain-extended with linear polymers; **conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

IT 107-13-1D, 2-Propenenitrile, hydrogenated, Michael-addition dendrimers, reaction products with linear polymers and cytotoxins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Polypropylenimine; **conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

IT 55383-37-4DP, Desacetylvinblastine hydrazide, reaction products with PAMAM-polyethylene glycol derivative adducts 180288-69-1DP, Trastuzumab, reaction products with PAMAM-polyethylene glycol derivative adducts 944251-17-6DP, reaction products with PAMAM and cytotoxins 944251-20-1DP, reaction products with PAMAM-polyethylene glycol derivative adducts and cytotoxins 944251-22-3DP, reaction products with PAMAM and cytotoxins 944251-25-6DP, reaction products with PAMAM and cytotoxins 944251-29-0DP, reaction products with PAMAM-polyethylene glycol derivative adducts and cytotoxins
RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

IT 50-07-7D, Mitomycin C, reaction products with dendrimers chain-extended with linear polymers 50-18-0D, Cyclophosphamide, reaction products with dendrimers chain-extended with linear polymers 54-62-6D, Aminopterin, reaction products with dendrimers chain-extended with linear polymers 57-22-7D, Vincristine, reaction products with dendrimers chain-extended with linear polymers 59-05-2D, Methotrexate, reaction products with dendrimers chain-extended with linear polymers 64-86-8D, Colchicine, reaction products with dendrimers chain-extended with linear polymers

71-30-7D, Cytosine, reaction products with dendrimers chain-extended with linear polymers 148-82-3D, Melphalan, reaction products with dendrimers chain-extended with linear polymers 305-03-3D, Chlorambucil, reaction products with dendrimers chain-extended with linear polymers 512-64-1D, Echinomycin, reaction products with dendrimers chain-extended with linear polymers 518-28-5D, Podophyllotoxin, reaction products with dendrimers chain-extended with linear polymers 528-74-5D, Dichloromethotrexate, reaction products with dendrimers chain-extended with linear polymers 669-72-7D, Norbiotin, reaction products with dendrimers chain-extended with linear polymers 865-21-4D, Vinblastine, reaction products with dendrimers chain-extended with linear polymers 1401-16-7D, Rhodomycin, reaction products with dendrimers chain-extended with linear polymers 1402-38-6D, Actinomycin, reaction products with dendrimers chain-extended with linear polymers 1404-15-5D, Nogalamycin, reaction products with dendrimers chain-extended with linear polymers 1784-22-1D, Homobiotin, reaction products with dendrimers chain-extended with linear polymers 2410-93-7D, Methopterin, reaction products with dendrimers chain-extended with linear polymers 2998-57-4D, Estramustine, reaction products with dendrimers chain-extended with linear polymers 3352-69-0D, Desacetylvinblastine, reaction products with dendrimers chain-extended with linear polymers 3376-83-8D, Biotin sulfoxide, reaction products with dendrimers chain-extended with linear polymers 4055-39-4D, Mitomycin A, reaction products with dendrimers chain-extended with linear polymers 6377-18-0D, Chartreusin, reaction products with dendrimers chain-extended with linear polymers 7439-89-6D, Iron, peptide derivs., reaction products with dendrimers chain-extended with linear polymers 7440-02-0D, Nickel, peptide derivs., reaction products with dendrimers chain-extended with linear polymers 7440-06-4D, Platinum, peptide derivs., reaction products with dendrimers chain-extended with linear polymers 7440-43-9D, Cadmium, peptide derivs., reaction products with dendrimers chain-extended with linear polymers 7440-48-4D, Cobalt, peptide derivs., reaction products with dendrimers chain-extended with linear polymers 7440-50-8D, Copper, peptide derivs., reaction products with dendrimers chain-extended with linear polymers 7440-55-3D, Gallium, peptide derivs., reaction products with dendrimers chain-extended with linear polymers 7440-57-5D, Gold, peptide derivs., reaction products with dendrimers chain-extended with linear polymers 7440-62-2D, Vanadium, peptide derivs., reaction products with dendrimers chain-extended with linear polymers 7440-66-6D, Zinc, peptide derivs., reaction products with dendrimers chain-extended with linear polymers 7689-03-4D, Camptothecin, reaction products with dendrimers chain-extended with linear polymers 9002-89-5D, Polyvinyl alcohol, reaction products with dendrimers and cytotoxins 9003-11-6D, Ethylene oxide-propylene oxide copolymer, reaction products with dendrimers and cytotoxins 9003-39-8D, Polyvinylpyrrolidone, reaction products with dendrimers and cytotoxins 9004-54-0D, Dextran, reaction products with dendrimers and cytotoxins 12687-93-3D, Piericidin, reaction products with dendrimers chain-extended with linear polymers 15228-71-4D, reaction products with dendrimers chain-extended with linear polymers 15663-27-1D, Cisplatin, reaction products with dendrimers chain-extended with linear polymers 18378-89-7D, Mithramycin, reaction products with dendrimers chain-extended with linear polymers 20004-62-0D, Geliomycin, reaction products with dendrimers chain-extended with linear polymers 20830-81-3D, Daunorubicin, reaction products with

dendrimers chain-extended with linear polymers 22342-46-7D, Diaminobiotin, reaction products with dendrimers chain-extended with linear polymers 23214-92-8D, Doxorubicin, reaction products with dendrimers chain-extended with linear polymers 23360-92-1D, Leurosine, reaction products with dendrimers chain-extended with linear polymers 25191-15-5D, Polyphenylalanine, reaction products with dendrimers and cytotoxins 25248-59-3D, Polyphenylalanine, reaction products with dendrimers and cytotoxins 25322-68-3D, Polyethylene glycol, reaction products with dendrimers and cytotoxins 25322-69-4D, Polypropylene oxide, reaction products with dendrimers and cytotoxins 25619-78-7D, Polytyrosine, reaction products with dendrimers and cytotoxins 25667-16-7D, Polytyrosine, reaction products with dendrimers and cytotoxins 25718-94-9D, Polyglycine, reaction products with dendrimers and cytotoxins 25734-27-4D, Polyglycine, reaction products with dendrimers and cytotoxins 26009-03-0D, Polyglycolic acid, reaction products with dendrimers and cytotoxins 26023-30-3D, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)], reaction products with dendrimers and cytotoxins 26100-51-6D, Polylactic acid, reaction products with dendrimers and cytotoxins 26124-68-5D, Polyglycolic acid, reaction products with dendrimers and cytotoxins 28399-50-0D, Rabelomycin, reaction products with dendrimers chain-extended with linear polymers 30562-34-6D, Geldanamycin, reaction products with dendrimers chain-extended with linear polymers 33069-62-4D, Taxol, reaction products with dendrimers chain-extended with linear polymers 35846-53-8D, Maytansine, reaction products with dendrimers chain-extended with linear polymers 37231-28-0D, Melittin, reaction products with dendrimers chain-extended with linear polymers 39472-31-6D, Carminomycin, reaction products with dendrimers chain-extended with linear polymers 40720-05-6D, Biotin sulfone, reaction products with dendrimers chain-extended with linear polymers 41575-94-4D, Carboplatin, reaction products with dendrimers chain-extended with linear polymers 50986-18-0D, Arabinoside, reaction products with dendrimers chain-extended with linear polymers 53123-88-9D, Rapamycin, reaction products with dendrimers chain-extended with linear polymers 57576-44-0D, Aclacinomycin A, reaction products with dendrimers chain-extended with linear polymers 62996-74-1D, Staurosporine, reaction products with dendrimers chain-extended with linear polymers 66584-72-3D, Ansamitocin P3, reaction products with dendrimers chain-extended with linear polymers 67995-68-0D, Tallysomycin, reaction products with dendrimers chain-extended with linear polymers 80790-68-7D, Morpholinodoxorubicin, reaction products with dendrimers chain-extended with linear polymers 82855-09-2D, Combretastatin, reaction products with dendrimers chain-extended with linear polymers 86639-52-3D, SN-38, reaction products with dendrimers chain-extended with linear polymers 87081-35-4D, Leptomycin B, reaction products with dendrimers chain-extended with linear polymers 88254-07-3D, reaction products with dendrimers chain-extended with linear polymers 88979-61-7D, Bafilomycin C1, reaction products with dendrimers chain-extended with linear polymers 90996-54-6D, Rhizoxin, reaction products with dendrimers chain-extended with linear polymers 99270-27-6D, Pluramycin, reaction products with dendrimers chain-extended with linear polymers 110417-88-4D, reaction products with dendrimers chain-extended with linear polymers 113440-58-7D, Calicheamicin, reaction products with dendrimers chain-extended with linear polymers 114977-28-5D, Taxotere, reaction products with dendrimers chain-extended with linear polymers 123948-87-8D, Topotecan, reaction products with dendrimers chain-extended with linear

polymers 124325-94-6D, Duocarmycin B2, reaction products with dendrimers chain-extended with linear polymers 159776-69-9D, Cemadotin, reaction products with dendrimers chain-extended with linear polymers 160800-57-7D, Auristatin E, reaction products with dendrimers chain-extended with linear polymers 174545-76-7D, Eleutherobin, reaction products with dendrimers chain-extended with linear polymers 207225-51-2D, Alnumycin, reaction products with dendrimers chain-extended with linear polymers 474645-18-6, AEVB 474645-27-7D, Monomethyl auristatin E, reaction products with dendrimers chain-extended with linear polymers 681125-76-8D, Auristatin EB, reaction products with dendrimers chain-extended with linear polymers 681125-78-0D, Auristatin E-FP, reaction products with dendrimers chain-extended with linear polymers
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

IT 26937-01-9DP, PAMAM, reaction products with polyethylene glycol derivs. and cytotoxins
RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(dendritic; **conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

IT 187848-68-6P, Polyethylene glycol 2-(tert-butoxycarbonylamino)ethyl 2-carboxylethyl ether 944251-09-6P 944251-11-0P **944251-13-2P 944251-14-3P 944251-15-4P 944251-16-5P** 944251-17-6P, Polyethylene glycol 2-(tert-butoxycarbonylamino)ethyl 2-(2,3,4,6-tetrafluorophenoxycarbonyl)ethyl ether 944251-22-3P 944251-23-4P 944251-25-6P 944251-26-7P 944251-27-8P 944251-28-9P
RL: **IMF (Industrial manufacture)**; RCT (Reactant); **PREP (Preparation)**; **RACT (Reactant or reagent)**
(**precursor**; **conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

IT 23541-50-6DP, Daunorubicin hydrochloride, reaction products with PAMAM-polyethylene glycol derivative adducts 548777-19-1DP, reaction products with PAMAM-polyethylene glycol derivative adducts and cytotoxins **944251-16-5DP**, reaction products with PAMAM and cytotoxins 944251-19-8DP, reaction products with PAMAM-polyethylene glycol derivative adducts and cytotoxins 944251-28-9DP, reaction products with PAMAM and cytotoxins
RL: **IMF (Industrial manufacture)**; THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(**precursor**; **conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

IT 76-05-1, Trifluoroacetic acid, reactions 586-89-0, 4-Acetylbenzoic acid 24424-99-5, Bis(tert-butyl) dicarbonate 142685-25-4, 2,3,5,6-Tetrafluorophenyl trifluoroacetate 196936-04-6, Polyethylene glycol 2-aminoethyl 2-carboxyethyl ether 459134-74-8 944251-08-5 **944251-12-1** 944251-21-2 944251-24-5
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(**precursor**; **conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

IT 23109-05-9D, α-Amanitin, reaction products with dendrimers chain-extended with linear polymers
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(reaction products, with dendrimers chain-extended with linear polymers; **conjugates** of cytotoxic agents and dendrimers chain-extended with linear polymers)

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ACCESSION NUMBER: 2007:172145 HCAPLUS Full-text
DOCUMENT NUMBER: 146:423816
TITLE: **Conjugation** of Bioactive Ligands to PEG-Grafted Chitosan at the Distal End of PEG
AUTHOR(S): Fernandez-Megia, Eduardo; Novoa-Carballal, Ramon; Quinoa, Emilio; Riguera, Ricardo
CORPORATE SOURCE: Departamento de Quimica Organica, Facultad de Quimica and Unidad de RMN de Biomoleculas Asociada al CSIC, Universidad de Santiago de Compostela, Santiago de Compostela, 15782, Spain
SOURCE: Biomacromolecules (2007), 8(3), 833-842
CODEN: BOMAF6; ISSN: 1525-7797
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Graft copolymers of chitosan and PEG-CO2H incorporating biol. active mols. and tags (mannose, cholesterol, a coumarin dye, and biotin) at the distal end of poly(ethylene glycol) (PEG) were synthesized in excellent yields and nearly quant. mass recoveries. Exptl. conditions allowing the preparation of multifunctional graft copolymers incorporating simultaneously several of those active mols. and tags in controlled ratios are also presented. The required functionalized PEG-CO2H **conjugates** were prepared from a heterodifunctional PEG and the exptl. conditions established to ensure the purity of PEG end groups (1H and 13C NMR and matrix-assisted laser desorption/ionization mass spectrometry-time of flight (MALDI-TOF)) and the completion of each synthetic step.

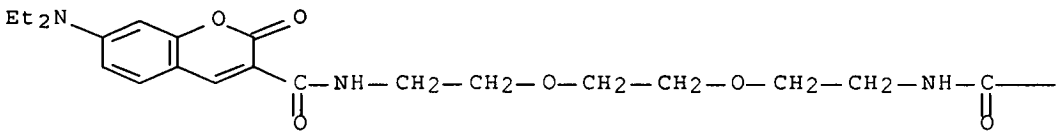
IT **934265-48-2P 934265-51-7P**
RL: **SPN (Synthetic preparation); PREP (Preparation)**
(comprised of actual and assumed **monomers**; **conjugation** of bioactive ligands to poly(ethylene glycol)-grafted chitosan at the distal end of poly(ethylene glycol))

RN 934265-48-2 HCAPLUS
CN Chitosan, hydrochloride, polymer with oxirane, 14-[7-(diethylamino)-2-oxo-2H-1-benzopyran-3-yl]-3,14-dioxo-7,10-dioxa-4,13-diazatetradec-1-yl ether, graft (CA INDEX NAME)

CM 1

CRN 934265-47-1
CMF C23 H33 N3 O7

PAGE 1-A



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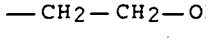


CM 2

CRN 934265-41-5
CMF (C2 H4 O . Unspecified)x
CCI PMS

CM 3

CRN 70694-72-3
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 4

CRN 75-21-8
CMF C2 H4 O

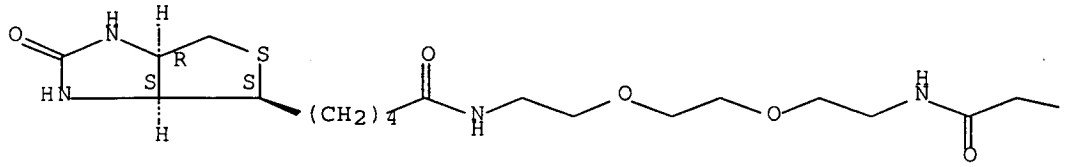
RN 934265-51-7 HCAPLUS
CN Chitosan, hydrochloride, polymer with oxirane, 14-[7-(diethylamino)-2-oxo-2H-1-benzopyran-3-yl]-3,14-dioxo-7,10-dioxa-4,13-diazatetradec-1-yl 18-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-3,14-dioxo-7,10-dioxa-4,13-diazaoctadec-1-yl 3-[[2-[2-[2-(α-D-mannopyranosyloxy)ethoxy]ethoxy]ethyl]amino]-3-oxopropyl ether, graft (CA INDEX NAME)

CM 1

CRN 934265-49-3
CMF C19 H34 N4 O6 S

Absolute stereochemistry.

PAGE 1-A



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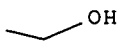
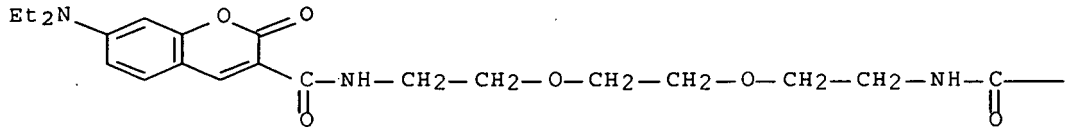


CM 2

CRN 934265-47-1
CMF C23 H33 N3 O7

PAGE 1-A



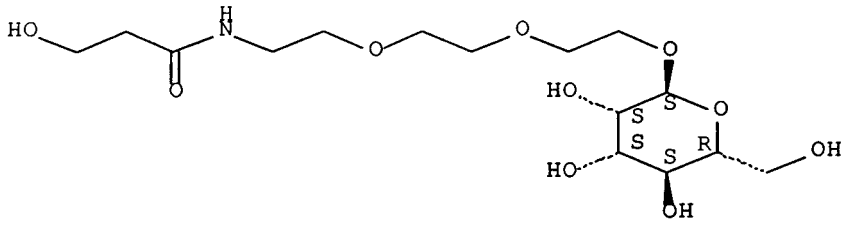
PAGE 1-B

—CH2—CH2—OH

CM 3

CRN 934265-42-6
CMF C15 H29 N O10

Absolute stereochemistry.



CM 4

CRN 934265-41-5
CMF (C2 H4 O . Unspecified)x
CCI PMS

CM 5

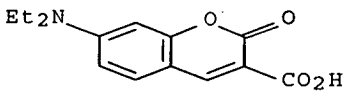
CRN 70694-72-3
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 6

CRN 75-21-8
CMF C2 H4 O

IT **50995-74-9**, 3-Carboxy-7-(diethylamino)coumarin
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(conjugation of bioactive ligands to poly(ethylene glycol)-grafted chitosan at the distal end of poly(ethylene glycol))
RN 50995-74-9 HCAPLUS
CN 2H-1-Benzopyran-3-carboxylic acid, 7-(diethylamino)-2-oxo- (CA INDEX NAME)



IT **934218-42-5P 934218-44-7P 934218-50-5P**
934218-54-9P 934218-59-4P
RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; **RACT (Reactant or reagent)**
(conjugation of bioactive ligands to poly(ethylene glycol)-grafted chitosan at the distal end of poly(ethylene glycol))
RN 934218-42-5 HCAPLUS
CN 5,8-Dioxa-2,11-diazadodecanoic acid, 12-[7-(diethylamino)-2-oxo-2H-1-benzopyran-3-yl]-12-oxo-, 1,1-dimethylethyl ester (CA INDEX NAME)

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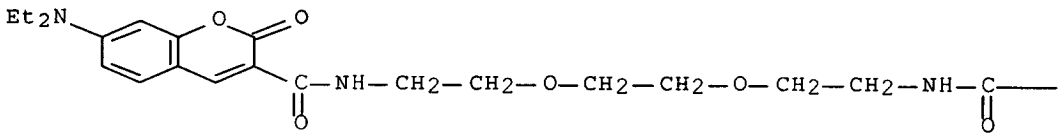

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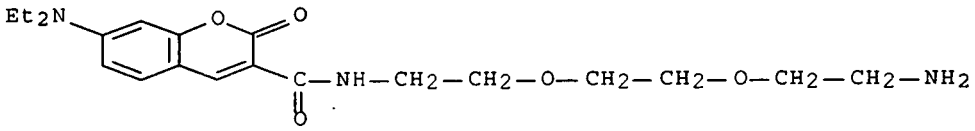
—OBu-t

RN 934218-44-7 HCAPLUS
CN 2H-1-Benzopyran-3-carboxamide, N-[2-[2-(2-aminoethoxy)ethoxy]ethyl]-7-(diethylamino)-2-oxo-, 2,2,2-trifluoroacetate (1:1) (CA INDEX NAME)

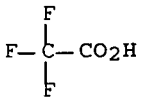
CM 1

CRN 934218-43-6
CMF C20 H29 N3 O5



CM 2

CRN 76-05-1
CMF C2 H F3 O2



RN 934218-50-5 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-[14-[7-(diethylamino)-2-oxo-2H-1-benzopyran-3-yl]-3,14-dioxo-7,10-dioxa-4,13-diazatetradec-1-yl]-ω-[2-[[(9H-fluoren-9-ylmethoxy)carbonyl]amino]ethoxy]- (CA INDEX NAME)

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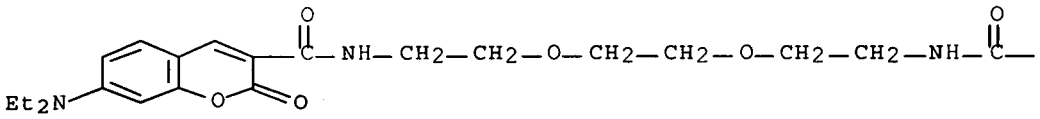

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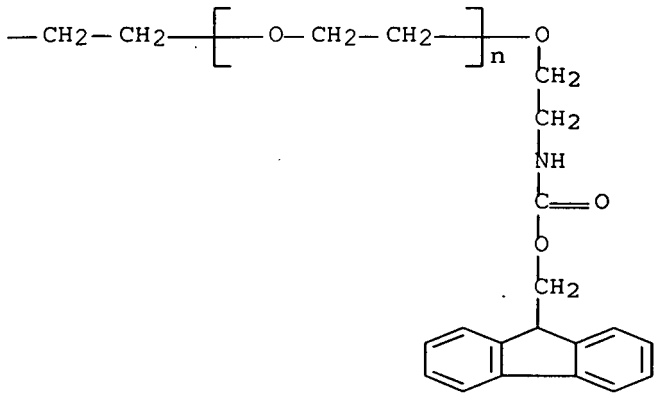

RN 934218-54-9 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α-(2-aminoethyl)-ω-[[14-[7-(diethylamino)-2-oxo-2H-1-benzopyran-3-yl]-3,14-dioxo-7,10-dioxa-4,13-diazatetradec-1-yl]oxy]- (CA INDEX NAME)

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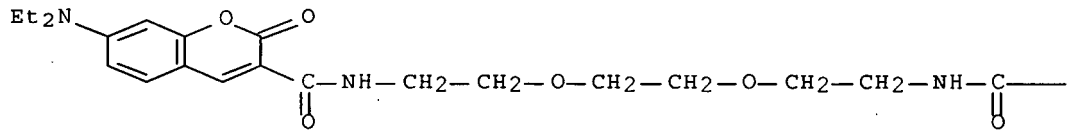

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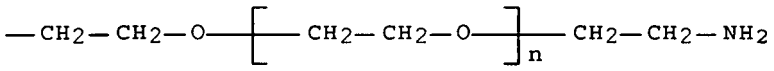

RN 934218-59-4 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α-[2-[(4-carboxy-1-oxobutyl)amino]ethyl]-ω-[[14-[7-(diethylamino)-2-oxo-2H-1-benzopyran-3-yl]-3,14-dioxo-7,10-dioxa-4,13-diazatetradec-1-yl]oxy]- (CA INDEX NAME)

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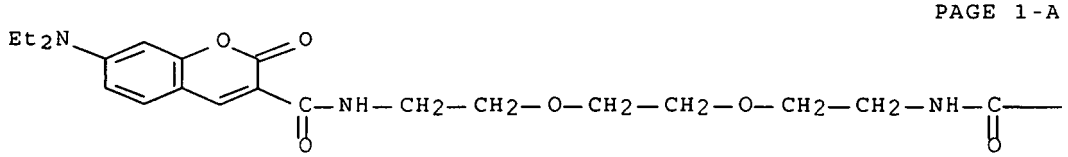

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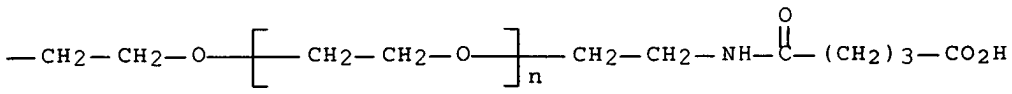


CC 44-5 (Industrial Carbohydrates)
Section cross-reference(s): 35
IT Polyoxyalkylenes, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(graft polymers, chitosan; **conjugation** of bioactive ligands to poly(ethylene glycol)-grafted chitosan at the distal end of poly(ethylene glycol))
IT 934265-43-7P 934265-45-9P **934265-48-2P** 934265-50-6P
934265-51-7P 934265-52-8P
RL: **SPN (Synthetic preparation); PREP (Preparation)**
(comprised of actual and assumed **monomers**; **conjugation** of bioactive ligands to poly(ethylene glycol)-grafted chitosan at the distal end of poly(ethylene glycol))
IT 58-85-5, Biotin 108-55-4, Glutaric anhydride 7144-08-3
7296-15-3, α-D-Mannose **50995-74-9**,
3-Carboxy-7-(diethylamino)coumarin 125220-94-2 153086-78-3
153252-68-7 488085-18-3
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(**conjugation** of bioactive ligands to poly(ethylene glycol)-grafted chitosan at the distal end of poly(ethylene glycol))
IT 175885-18-4P 194920-57-5P 871245-17-9P **934218-42-5P**
934218-44-7P 934218-45-8P 934218-46-9P 934218-47-0P
934218-48-1P 934218-49-2P **934218-50-5P** 934218-51-6P
934218-52-7P 934218-53-8P **934218-54-9P** 934218-55-0P
934218-56-1P 934218-57-2P 934218-58-3P **934218-59-4P**
RL: RCT (Reactant); **SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)**
(**conjugation** of bioactive ligands to poly(ethylene glycol)-grafted chitosan at the distal end of poly(ethylene glycol))
REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 3 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:365174 HCAPLUS Full-text
DOCUMENT NUMBER: 144:398344
TITLE: Method of insertion of a lipid-linked moiety into a pre-formed lipid assembly using microwaves
INVENTOR(S): Barenholz, Yechezkel; Garbuzenko, Olga
PATENT ASSIGNEE(S): Alza Corp., USA
SOURCE: PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006042270	A1	20060420	WO 2005-US36646	200510 07
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
AU 2005295072	A1	20060420	AU 2005-295072	200510 07
CA 2582242	A1	20060420	CA 2005-2582242	200510 07
US 2006121105	A1	20060608	US 2005-246340	200510 07
EP 1809246	A1	20070725	EP 2005-807394	200510 07
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU				
PRIORITY APPLN. INFO.:			US 2004-617505P P	200410 08
			WO 2005-US36646 W	200510 07

AB A method of inserting a lipid-linked moiety into a lipid assembly, such as a planar lipid monolayer or bilayer, a spherical lipid vesicle, a micelle, or an emulsion envelope monolayer is described. In the method, the lipid assembly and the lipid-linked moiety are contacted in the presence of microwave irradiation to permit the lipid-linked moiety to become associated with the lipid assembly. In one embodiment, the lipid assembly is a liposome and the lipid-linked moiety is a lipopolymer. Compns. comprised of a lipid layer and of a lipid-linked moiety, prepared in accord with the method, are also described. For example, liposomes were prepared from partially hydrogenated soy phosphatidylcholine, cholesterol, and methoxy(polyethylene glycol)-distearoylphosphatidylethanolamine (mPEG-DSPE) (55:40:5 molar ratio) by lipid film hydration, followed by membrane extrusion. Multilamellar liposomes were formed by vigorous shaking of the lipid film in an aqueous solution of ammonium sulfate and deferoxamine. Liposomes were subsequently extruded stepwise through polycarbonate membranes with gradually decreasing pore sizes from 0.2 to 0.05 μm to give vesicles having a particle size of 70 to 100 nm. A suspension of lipid-polymer-ligand conjugate micelles comprising a single chain Fv antibody fragment having binding affinity for c-erbB-2 receptor

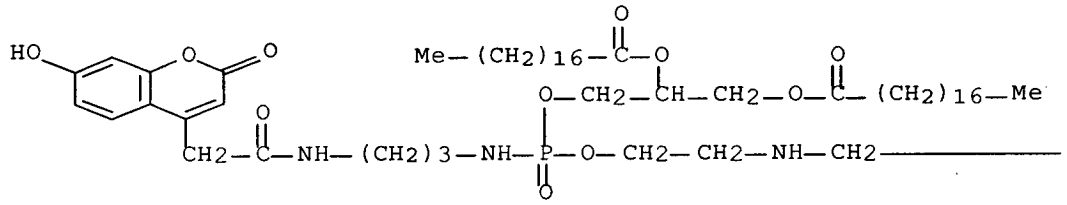
epitope and a reactive PEG-DSPE **conjugate** (DSPE-PEG-scFv) were mixed with preformed liposomes and incubated in the presence of microwave irradiation for 30 s to 10 min.

IT 883224-87-1P
RL: **SPN (Synthetic preparation)**; THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(insertion of lipopolymer into pre-formed lipid assembly using microwaves)

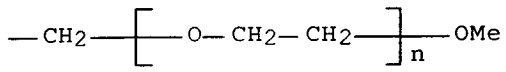
RN 883224-87-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α-[(10R)-7-[[3-[[(7-hydroxy-2-oxo-2H-1-benzopyran-4-yl)acetyl]amino]propyl]amino]-7-oxido-13-oxo-10-[(1-oxooctadecyl)oxy]-6,8,12-trioxa-3-aza-7-phosphatriacont-1-yl]-ω-methoxy- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



CC 63-6 (Pharmaceuticals)

IT Receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(cell surface, antibody affinity for, lipid **conjugates**; insertion of lipopolymer into pre-formed lipid assembly using microwaves)

IT Ligands
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**conjugated**, with lipopolymer; insertion of lipopolymer into pre-formed lipid assembly using microwaves)

IT Lipids, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**conjugates**, with biol. ligands, drugs, and polymers; insertion of lipopolymer into pre-formed lipid assembly using microwaves)

IT Antibodies and Immunoglobulins
Nucleic acids
Peptides, biological studies
Proteins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**conjugates**, with lipids; insertion of lipopolymer into pre-formed lipid assembly using microwaves)

IT Antibodies and Immunoglobulins
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(fragments, single chain Fv, **conjugates** with DSPE-PEG-maleimide; insertion of lipopolymer into pre-formed lipid assembly using microwaves)

IT Peptidomimetics
(lipid **conjugates**; insertion of lipopolymer into pre-formed lipid assembly using microwaves)

IT 612071-97-3DP, **conjugates** with single chain Fv antibody fragment **883224-87-1P**
RL: **SPN (Synthetic preparation)**; THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(insertion of lipopolymer into pre-formed lipid assembly using microwaves)

IT 57-88-5, Cholesterol, biological studies 70-51-9, Deferoxamine 7783-20-2, Ammonium sulfate, biological studies 23214-92-8, Doxorubicin 25322-68-3D, Polyethylene glycol, lipid **conjugates** 182280-69-9, MPEG-DSPE
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(insertion of lipopolymer into pre-formed lipid assembly using microwaves)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT.

L22 ANSWER 4 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:340585 HCAPLUS Full-text
DOCUMENT NUMBER: 144:376499
TITLE: Lipopolymer **conjugates** used in drug delivery systems
INVENTOR(S): Zalipsky, Samuel
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 12 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006079486	A1	20060413	US 2005-245673	20051007
AU 2005295071	A1	20060420	AU 2005-295071	20051007
CA 2582589	A1	20060420	CA 2005-2582589	20051007
WO 2006042269	A2	20060420	WO 2005-US36645	20051007
WO 2006042269	A3	20060622		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK,

MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

EP 1809333 A2 20070725 EP 2005-807418 200510 07

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU

PRIORITY APPLN. INFO.: US 2004-617585P P 200410 08

WO 2005-US36645 W 200510 07

OTHER SOURCE(S): CASREACT 144:376499; MARPAT 144:376499

AB **Conjugates** of formula (ALOP(O)(Z)OL'B) are useful in biomedicinal applications such as delivery of drugs or labeling moieties or as components of liposomes or micelles. In formula (ALOP(O)(Z)OL'B), A is a hydrophilic polymer, each of L and L' is independently a linker group, B is a lipid moiety; and Z is a diagnostic ligand, a biol. relevant ligand, or a reactive linking moiety, which is generally linked to the phosphorus atom of the **conjugate** via a nitrogen, oxygen or sulfur atom in Z. For example, oral pharmaceuticals contained mPEG-DSPE **conjugate** with 7-hydroxycoumarin.

IT **882403-08-9P**

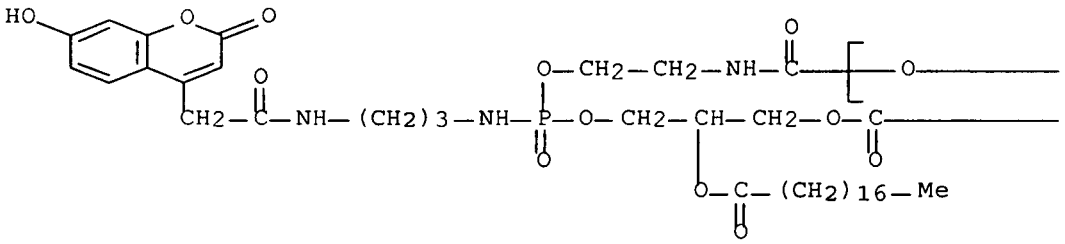
RL: **SPN (Synthetic preparation)**; THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)

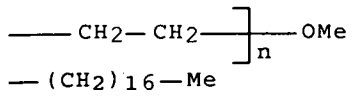
(oral pharmaceuticals containing lipopolymer **conjugates**)

RN 882403-08-9 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α-[(9R)-6-[[3-[[(7-hydroxy-2-oxo-2H-1-benzopyran-4-yl)acetyl]amino]propyl]amino]-6-oxido-1,12-dioxo-9-[(1-oxooctadecyl)oxy]-5,7,11-trioxa-2-aza-6-phosphanonacos-1-yl]-ω-methoxy- (9CI) (CA INDEX NAME)

PAGE 1-A





INCL 514078000; 554076000; 552506000
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 35
ST lipopolymer **conjugate** drug delivery system prepn; mPEG DSPE hydroxycoumarin **conjugate** oral pharmaceutical
IT Drug delivery systems
(oral; oral pharmaceuticals containing lipopolymer **conjugates**)
IT 2387-23-7P
RL: BYP (Byproduct); REM (Removal or disposal); PREP (Preparation); PROC (Process)
(oral pharmaceuticals containing lipopolymer **conjugates**)
IT 9001-63-2, Lysozyme 15231-41-1 75178-96-0 156543-00-9 185102-64-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(oral pharmaceuticals containing lipopolymer **conjugates**)
IT 882403-07-8P 882403-09-0P 882403-10-3P 907197-14-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(oral pharmaceuticals containing lipopolymer **conjugates**)
IT 79-37-8, Oxalyl chloride 121-44-8, Triethylamine, reactions 538-75-0, Dicyclohexyl carbodiimide 6066-82-6
RL: RGT (Reagent); RACT (Reactant or reagent)
(oral pharmaceuticals containing lipopolymer **conjugates**)
IT **882403-08-9P** 882403-09-0DP, protein **conjugate** derivs.
RL: **SPN (Synthetic preparation)**; THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(oral pharmaceuticals containing lipopolymer **conjugates**)

L22 ANSWER 5 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:300298 HCAPLUS Full-text
DOCUMENT NUMBER: 145:511178
TITLE: Two-photon triggered drug delivery system: a new way to prevent posterior capsule opacification
AUTHOR(S): Kim, H.-C.; Haertner, S.; Hampp, N.
CORPORATE SOURCE: Department of Chemistry, Univ. of Marburg, Marburg, D-35032, Germany
SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (2006), 6138(Ophthalmic Technologies XVI), 61380S/1-61380S/8
CODEN: PSISDG; ISSN: 0277-786X
PUBLISHER: SPIE-The International Society for Optical Engineering
DOCUMENT TYPE: Journal
LANGUAGE: English
AB One of the major complications of cataract surgery is posterior capsule opacification caused by proliferation and migration of residual lens epithelial cells into the visual axis. In this study we present a novel approach to treat posterior capsule opacification in a non-invasive manner. A polymer-drug **conjugate** has been developed which is suitable for manufacturing functional intraocular lenses equipped with a drug delivery system. The

therapeutic mols., 5-fluorouracil, were attached through a photolabile linkage to the acrylic polymer backbone of the intraocular lens material. The controlled release of 5-fluorouracil is accomplished by two-photon induced cleavage of the linkage which is stable in ordinary conditions. The properties of the therapeutic system are characterized and the function is demonstrated in in vitro tests. The utilization of two-photon-absorption processes in drug delivery may provide a powerful tool to prevent posterior capsule opacification.

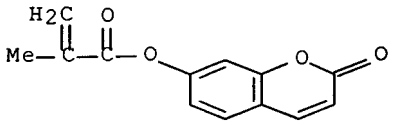
IT **915107-89-0P**
RL: PRP (Properties); **SPN (Synthetic preparation)**; **PREP (Preparation)**
(two-photon triggered drug delivery system-new way to prevent posterior capsule opacification)

RN 915107-89-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with 2-oxo-2H-1-benzopyran-7-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

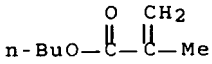
CM 1

CRN 64498-59-5
CMF C13 H10 O4



CM 2

CRN 97-88-1
CMF C8 H14 O2



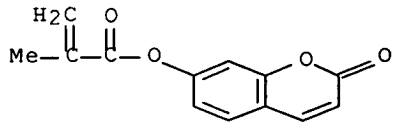
IT **915107-89-0DP**, reaction products with 1-heptanoyl-5-fluorouracil
RL: PRP (Properties); **SPN (Synthetic preparation)**; THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(two-photon triggered drug delivery system-new way to prevent posterior capsule opacification)

RN 915107-89-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with 2-oxo-2H-1-benzopyran-7-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

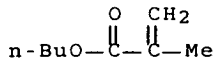
CM 1

CRN 64498-59-5
CMF C13 H10 O4



CM 2

CRN 97-88-1
CMF C8 H14 O2



CC 63-7 (Pharmaceuticals)
ST posterior capsule opacification drug delivery system two photon absorption; fluorouracil intraocular lens acrylic polymer drug **conjugate**
IT **915107-89-0P**
RL: PRP (Properties); **SPN (Synthetic preparation)**; **PREP (Preparation)**
(two-photon triggered drug delivery system-new way to prevent posterior capsule opacification)
IT **915107-89-0DP**, reaction products with 1-heptanoyl-5-fluorouracil
RL: PRP (Properties); **SPN (Synthetic preparation)**; THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(two-photon triggered drug delivery system-new way to prevent posterior capsule opacification)
IT 51-21-8DP, 5-Fluorouracil, polymer **conjugates**
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(two-photon triggered drug delivery system-new way to prevent posterior capsule opacification)
REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 6 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:1178245 HCAPLUS Full-text
DOCUMENT NUMBER: 144:114130
TITLE: An approach to heterobifunctional poly(ethyleneglycol) bioconjugates
AUTHOR(S): Li, Jane; Crasto, Curtis F.; Weinberg, James S.; Amiji, Mansoor; Shenoy, Dinesh; Sridhar, Srinivas; Bubley, Glenn J.; Jones, Graham B.
CORPORATE SOURCE: Bioorganic and Medicinal Chemistry Laboratories, Department of Chemistry and Chemical Biology, Northeastern University, Boston, MA, 02115, USA
SOURCE: Bioorganic & Medicinal Chemistry Letters (2005), 15(24), 5558-5561

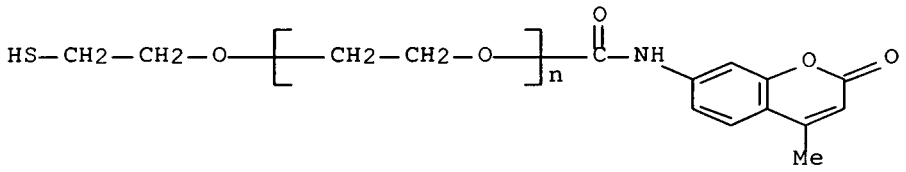
CODEN: BMCLE8; ISSN: 0960-894X
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 144:114130

AB A family of differentially substituted poly(ethyleneglycol) building blocks has been assembled from com. available material. Their utility is demonstrated by formation of amino acid **conjugates**, image contrast agents, gold nanoparticles, and functional antibody **conjugates**. Application in the cellular trafficking of antitumoral agent **conjugates** is expected.

IT **853684-75-0P**
RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; RACT (Reactant or reagent)
(heterobifunctional poly(ethyleneglycol) bioconjugates)

RN 853684-75-0 HCAPLUS

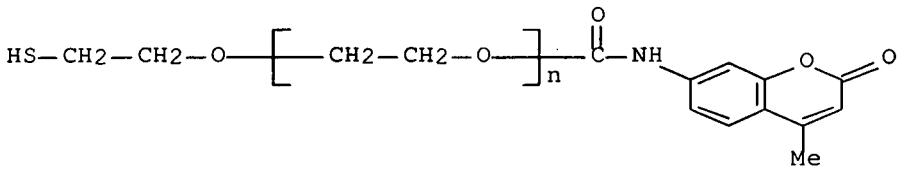
CN Poly(oxy-1,2-ethanediyl), α-[[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)amino]carbonyl]-ω-(2-mercaptoethoxy)- (9CI) (CA INDEX NAME)



IT **853684-75-0DP**, nanoparticle **conjugate** derivs.
RL: **SPN (Synthetic preparation)**; THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(heterobifunctional poly(ethyleneglycol) bioconjugates)

RN 853684-75-0 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α-[[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)amino]carbonyl]-ω-(2-mercaptoethoxy)- (9CI) (CA INDEX NAME)



CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 37

IT Antibodies and Immunoglobulins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(IgG, **conjugates**; heterobifunctional poly(ethyleneglycol) bioconjugates)

IT 35164-96-6P, Polyethylene glycol ditosylate 165729-83-9P **853684-75-0P** 872629-08-8P 872629-09-9P 872629-10-2P 872629-11-3P
RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP**

(**Preparation**); RACT (Reactant or reagent)
(heterobifunctional poly(ethyleneglycol) bioconjugates)
IT 872629-09-9DP, goat antibody/fluorescein **conjugate** derivs.
RL: SPN (Synthetic preparation); PREP (Preparation)
(heterobifunctional poly(ethyleneglycol) bioconjugates)
IT **853684-75-0DP**, nanoparticle **conjugate** derivs.
RL: **SPN (Synthetic preparation)**; THU (Therapeutic use);
BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(heterobifunctional poly(ethyleneglycol) bioconjugates)
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 7 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:493815 HCAPLUS Full-text
DOCUMENT NUMBER: 143:27058
TITLE: **Conjugated** polymers having coumarin-type groups
INVENTOR(S): Parham, Amir; Heun, Susanne; Becker, Heinrich
PATENT ASSIGNEE(S): Covion Organic Semiconductors G.m.b.H., Germany; Falcou, Aurelie
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005053054	A1	20050609	WO 2004-EP13313	200411 24
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10355786	A1	20050630	DE 2003-10355786	200311 26
EP 1709699	A1	20061011	EP 2004-819213	200411 24
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS				
US 2007123690	A1	20070531	US 2006-580293	200605 23

PRIORITY APPLN. INFO.: DE 2003-10355786 A 200311 26

WO 2004-EP13313 W
200411
24

AB The invention relates to **conjugated** polymers containing side or main chains having coumarin structural units or related units having S or Se instead of O in the ring and(or) attached to the ring. The inventive materials exhibit significantly higher photostability and are thus more suitable for using in polymer organic light-emitting diodes. A typical polymer was prepared from 7-[N,N-bis(4-bromophenyl)amino]-4-methylcoumarin.

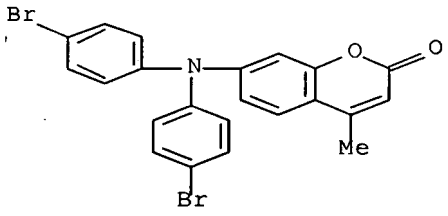
IT **852994-53-7P 852994-54-8P**
RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(**conjugated** polymers having coumarin-type groups for improved photostability)

RN 852994-53-7 HCAPLUS

CN 2H-1-Benzopyran-2-one, 7-[bis(4-bromophenyl)amino]-4-methyl-, polymer with N,N'-bis(4-bromophenyl)-N,N'-bis[4-(1,1-dimethylethyl)phenyl][1,1'-biphenyl]-4,4'-diamine, 2',7'-dibromo-2,3,6,7-tetrakis(2-methylbutoxy)-9,9'-spirobi[9H-fluorene] and 2,2'-[2',3',6',7'-tetrakis(2-methylbutoxy)-9,9'-spirobi[9H-fluorene]-2,7-diyl]bis[1,3,2-dioxaborolane] (9CI) (CA INDEX NAME)

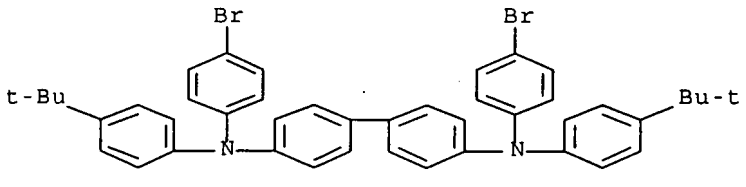
CM 1

CRN 852994-52-6
CMF C22 H15 Br2 N O2



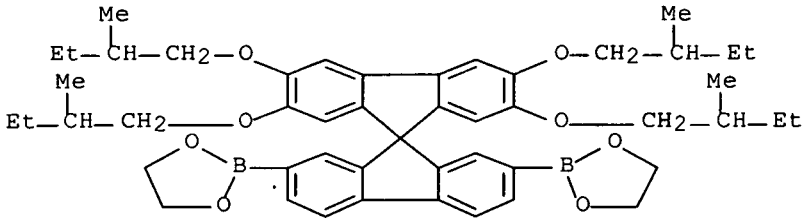
CM 2

CRN 463944-36-7
CMF C44 H42 Br2 N2



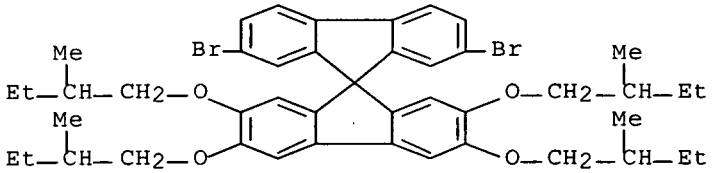
CM 3

CRN 396123-43-6
CMF C49 H62 B2 O8



CM 4

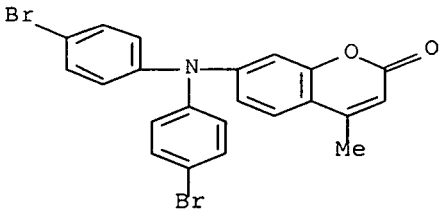
CRN 395059-23-1
CMF C45 H54 Br2 O4



RN 852994-54-8 HCAPLUS
CN 2H-1-Benzopyran-2-one, 7-[bis(4-bromophenyl)amino]-4-methyl-, polymer with 2',7'-dibromo-2,3,6,7-tetrakis(2-methylbutoxy)-9,9'-spirobi[9H-fluorene] and 2,2'-[2',3',6',7'-tetrakis(2-methylbutoxy)-9,9'-spirobi[9H-fluorene]-2,7-diyl]bis[1,3,2-dioxaborolane] (9CI) (CA INDEX NAME)

CM 1

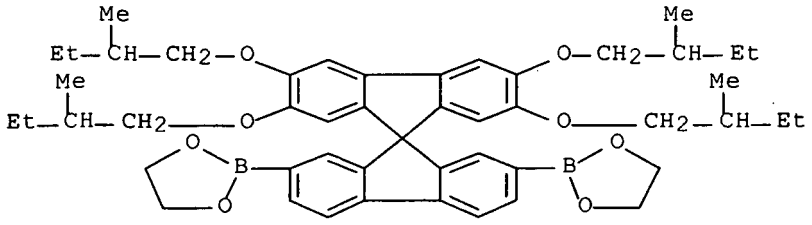
CRN 852994-52-6
CMF C22 H15 Br2 N O2



CM 2

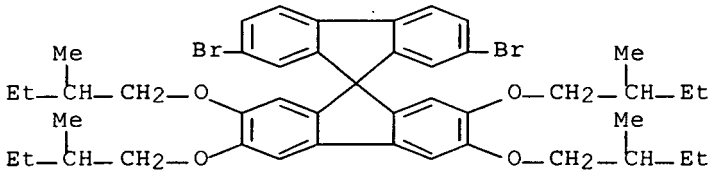
CRN 396123-43-6

CMF C49 H62 B2 O8

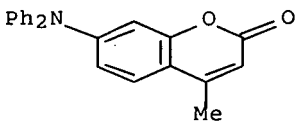


CM 3

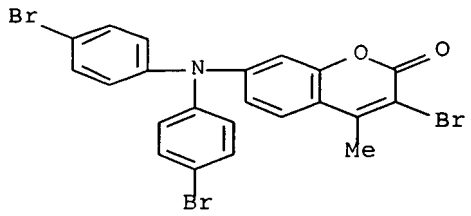
CRN 395059-23-1
CMF C45 H54 Br2 O4



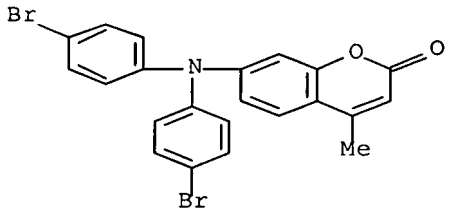
IT **318497-39-1P**, 7-(Diphenylamino)-4-methylcoumarin
852994-51-5P, 7-[Bis(4-bromophenyl)amino]-3-bromo-4-methylcoumarin
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); **RACT (Reactant or reagent)**
(monomer precursor; conjugated polymers having coumarin-type groups for improved photostability)
RN 318497-39-1 HCAPLUS
CN 2H-1-Benzopyran-2-one, 7-(diphenylamino)-4-methyl- (CA INDEX NAME)



RN 852994-51-5 HCAPLUS
CN 2H-1-Benzopyran-2-one, 7-[bis(4-bromophenyl)amino]-3-bromo-4-methyl- (CA INDEX NAME)



IT **852994-52-6P**, 7-[Bis(4-bromophenyl)amino]-4-methylcoumarin
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); **RACT (Reactant or reagent)**
(monomer; conjugated polymers having coumarin-type groups for improved photostability)
RN 852994-52-6 HCAPLUS
CN 2H-1-Benzopyran-2-one, 7-[bis(4-bromophenyl)amino]-4-methyl- (CA INDEX NAME)



IC ICM H01L051-30
ICS H05B033-14; C09K011-06
CC 35-5 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 76
ST light resistant coumarin group contg **conjugated** polymer; light emitting diode coumarin group contg **conjugated** polymer; sulfur analog coumarin group contg light resistant **conjugated** polymer; selenium analog coumarin group contg light resistant **conjugated** polymer
IT Polyamines
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(cardo; **conjugated** polymers having coumarin-type groups for improved photostability)
IT Light-resistant materials
(**conjugated** polymers having coumarin-type groups for improved photostability)
IT Field effect transistors
(**conjugated** polymers having coumarin-type groups for improved photostability for field-effect transistors)
IT Integrated circuits
(**conjugated** polymers having coumarin-type groups for improved photostability for integrated circuits)
IT Semiconductor lasers
(**conjugated** polymers having coumarin-type groups for improved photostability for laser diodes)
IT Electroluminescent devices
(**conjugated** polymers having coumarin-type groups for improved photostability for light-emitting diodes)

IT Solar cells
(**conjugated** polymers having coumarin-type groups for improved photostability for solar cells)
IT Thin film transistors
(**conjugated** polymers having coumarin-type groups for improved photostability for thin-film transistors)
IT Polymers, preparation
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**conjugated**; **conjugated** polymers having coumarin-type groups for improved photostability for laser diodes)
IT Luminescent substances
(photo-; **conjugated** polymers having coumarin-type groups for improved photostability)
IT Cardo polymers
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyamines; **conjugated** polymers having coumarin-type groups for improved photostability)
IT **852994-53-7P 852994-54-8P**
RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(**conjugated** polymers having coumarin-type groups for improved photostability)
IT 57999-49-2P, 2-(3-Bromophenoxy)tetrahydropyran 107396-23-6P, 3-(Diphenylamino)phenol **318497-39-1P**, 7-(Diphenylamino)-4-methylcoumarin 852994-50-4P, N,N-Diphenyl[3-(tetrahydropyran-2-yloxy)phenyl]amine **852994-51-5P**, 7-[Bis(4-bromophenyl)amino]-3-bromo-4-methylcoumarin
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); **RACT (Reactant or reagent)**
(**monomer precursor**; **conjugated** polymers having coumarin-type groups for improved photostability)
IT 110-87-2 122-39-4, Diphenylamine, reactions 141-97-9, Ethyl acetoacetate 591-20-8, 3-Bromophenol
RL: RCT (Reactant); RACT (Reactant or reagent)
(**monomer precursor**; **conjugated** polymers having coumarin-type groups for improved photostability)
IT **852994-52-6P**, 7-[Bis(4-bromophenyl)amino]-4-methylcoumarin
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); **RACT (Reactant or reagent)**
(**monomer**; **conjugated** polymers having coumarin-type groups for improved photostability)
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 8 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:350720 HCAPLUS Full-text
DOCUMENT NUMBER: 143:44178
TITLE: Biomedical applications of gold nanoparticles functionalized using hetero-bifunctional poly(ethylene glycol) spacer
AUTHOR(S): Fu, Wei; Shenoy, Dinesh; Li, Jane; Crasto, Curtis; Jones, Graham; Dimarzio, Charles; Sridhar, Srinivas; Amiji, Mansoor
CORPORATE SOURCE: Department of Physics, Northeastern University, Boston, MA, 02115, USA

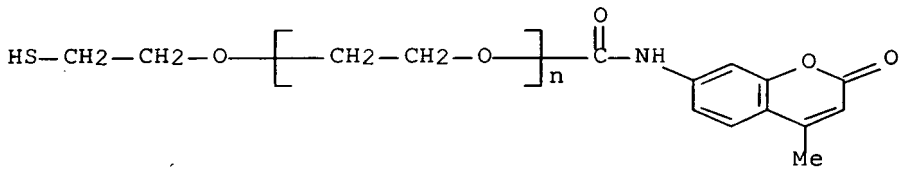
SOURCE: Materials Research Society Symposium Proceedings (2005), 845(Nanoscale Materials Science in Biology and Medicine), 223-228
CODEN: MRSPDH; ISSN: 0272-9172
PUBLISHER: Materials Research Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB To increase the targeting potential, circulation time, and the flexibility of surface-attached biomedically-relevant ligands on gold nanoparticles, hetero-bifunctional poly(ethylene glycol) (PEG, MW 1,500) was synthesized having a thiol group on one terminus and a reactive functional group on the other. Coumarin, a model fluorescent dye, was **conjugated** to the PEG spacer and gold nanoparticles were modified with coumarin-PEG-thiol. Surface attachment of coumarin through the PEG spacer decreases the fluorescence quenching effect of gold nanoparticles. The results of cellular cytotoxicity and fluorescence confocal analyses showed that the PEG spacer modified nanoparticles were essentially non-toxic and could be efficiently internalized in the cells within one hour of incubation.

IT **853684-75-0P**
RL: BSU (Biological study, unclassified); **SPN (Synthetic preparation)**; BIOL (Biological study); **PREP (Preparation)**
(synthesis, cytotoxicity study, and fluorescence confocal microscopy of gold nanoparticles functionalized with thiol- and coumarin-terminated poly(ethylene glycol))

RN 853684-75-0 HCAPLUS

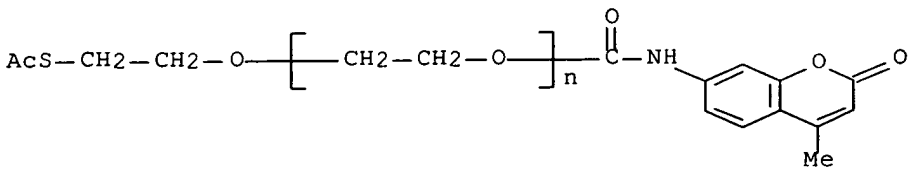
CN Poly(oxy-1,2-ethanediyl), α-[[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)amino]carbonyl]-ω-(2-mercaptoethoxy)- (9CI) (CA INDEX NAME)



IT **853684-74-9P**
RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; RACT (Reactant or reagent)
(synthesis, cytotoxicity study, and fluorescence confocal microscopy of gold nanoparticles functionalized with thiol- and coumarin-terminated poly(ethylene glycol))

RN 853684-74-9 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α-[[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)amino]carbonyl]-ω-[2-(acetylthio)ethoxy]- (9CI) (CA INDEX NAME)



CC 35-8 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 1, 9
IT 7440-57-5P, Gold, preparation **853684-75-0P**
RL: BSU (Biological study, unclassified); **SPN (Synthetic preparation)**; BIOL (Biological study); **PREP (Preparation)**
(synthesis, cytotoxicity study, and fluorescence confocal microscopy of gold nanoparticles functionalized with thiol- and coumarin-terminated poly(ethylene glycol))
IT 10387-40-3P, Potassium thioacetate 73342-22-0P, Polyethylene glycol monotosylate **853684-74-9P**
RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; RACT (Reactant or reagent)
(synthesis, cytotoxicity study, and fluorescence confocal microscopy of gold nanoparticles functionalized with thiol- and coumarin-terminated poly(ethylene glycol))
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 9 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:217848 HCAPLUS Full-text
DOCUMENT NUMBER: 142:438322
TITLE: Synthesis of novel coumarin-terminated poly (p-phenylene vinylene)s for application in LEDs
AUTHOR(S): Huang, Yan; Lu, Zhi-Yun; Peng, Qiang; Xie, Ru-Gang; Xie, Ming-Gui; Peng, Jun-Biao; Cao, Yong
CORPORATE SOURCE: Faculty of Chemistry, Sichuan University, Chengdu, 610064, Peop. Rep. China
SOURCE: Journal of Materials Science (2005), 40(3), 601-604
CODEN: JMTSAS; ISSN: 0022-2461
PUBLISHER: Springer
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Novel coumarin-terminated poly (p-phenylene vinylene)s were synthesized successfully via Gilch methodol. The resulting coumarin end-capped poly(2-methoxy-5-(2'-ethylhexyloxy)-1,4-phenylene vinylene) (CT-MEH-PPV) film gives yellow photoluminescence with a maximum intensity at 560 nm, which is noticeably blue-shifted about 40 nm from that of MEH-PPV (598 nm). Light-emitting diode based on a double-layer structure (ITO/PEDOT/CT-MEH-PPV/Ba/Al) showed yellow emission with a maximum brightness of 956 cd m-2 at 8.8 V and an external quantum efficiency of 0.28% at 49.5 mA cm-2. The coumarin-terminated poly(2,3-diphenyl-5-hexyl-1,4-phenylene vinylene) (CT-DPH-PPV), however, has similar emission spectrum with that of DPH-PPV, but its photoluminescence efficiency (0.78) is much more improved than that of DPH-PPV (0.55). The electroluminescent device (ITO/PEDOT/CT-DPH-PPV/Ba/Al) gave green emission peaked at 510 nm with a maximum brightness of 350 cd m-2 at 18 V and an external quantum efficiency of 0.04% at 61 mA cm-2. These results suggest

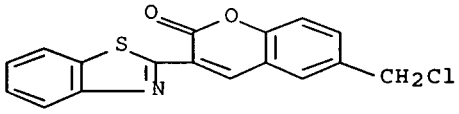
that it is a convenient way to modify the structure of **conjugated** polymers by terminating to tune the emission color and improve photoluminescent and electroluminescent efficiencies as well.

IT **850893-30-0P 850893-31-1P**
RL: DEV (Device component use); PRP (Properties); **SPN (Synthetic preparation)**; **PREP (Preparation)**; USES (Uses)
(synthesis and properties of novel coumarin-terminated poly(phenylene vinylene)s for LEDs)

RN 850893-30-0 HCAPLUS
CN 2H-1-Benzopyran-2-one, 3-(2-benzothiazolyl)-6-(chloromethyl)-, polymer with 1,4-bis(chloromethyl)-2-methoxy-5-(octyloxy)benzene (9CI) (CA INDEX NAME)

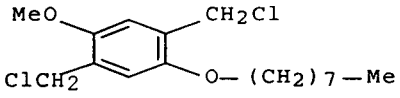
CM 1

CRN 467237-89-4
CMF C17 H10 Cl N O2 S



CM 2

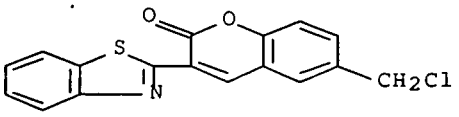
CRN 196877-73-3
CMF C17 H26 Cl2 O2



RN 850893-31-1 HCAPLUS
CN 2H-1-Benzopyran-2-one, 3-(2-benzothiazolyl)-6-(chloromethyl)-, polymer with 3',6'-bis(chloromethyl)-4'-octyl-1,1':2',1''-terphenyl (9CI) (CA INDEX NAME)

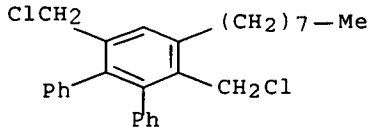
CM 1

CRN 467237-89-4
CMF C17 H10 Cl N O2 S



CM 2

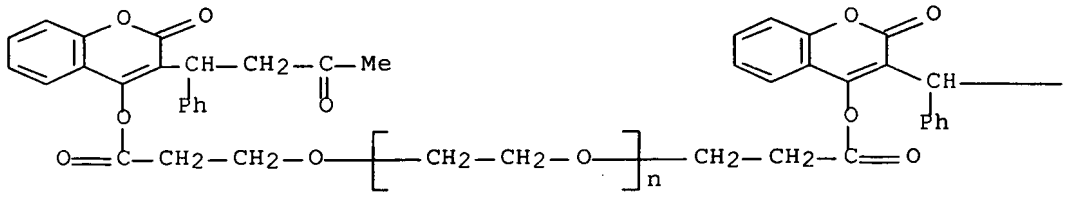
CRN 200705-47-1
CMF C28 H32 Cl2



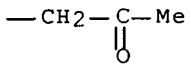
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 36, 76
IT **850893-30-0P 850893-31-1P**
RL: DEV (Device component use); PRP (Properties); **SPN (Synthetic preparation)**; **PREP (Preparation)**; USES (Uses)
(synthesis and properties of novel coumarin-terminated poly(phenylene vinylene)s for LEDs)
REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 10 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:1025974 HCAPLUS Full-text
DOCUMENT NUMBER: 142:360518
TITLE: Improvement of warfarin biopharmaceutics by **conjugation** with poly(ethylene glycol)
AUTHOR(S): Zacchigna, Marina; Di Luca, Gabriella; Cateni, Francesca; Maurich, Venerando
CORPORATE SOURCE: Dipartimento di Scienze Farmaceutiche, Trieste, 34127, Italy
SOURCE: European Journal of Pharmaceutical Sciences (2004), 23(4-5), 379-384
CODEN: EPSCED; ISSN: 0928-0987
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB One of the most used and useful polymers, poly(ethylene glycol) (PEG) was used as a carrier for warfarin. The drug-polymer **conjugate** was freely water soluble at room temperature The hydrolytic stability of the PEG-warfarin was investigated at physiol. pH and confirmed the stability of the **conjugate.** In vivo release studies demonstrated a good release of parent drug, without the initial high plasma level of warfarin.
IT **848927-28-6P**
RL: PKT (Pharmacokinetics); PRP (Properties); **SPN (Synthetic preparation)**; THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(improvement of warfarin biopharmaceutics by **conjugation** with poly(ethylene glycol))
RN 848927-28-6 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-[3-oxo-3-[[2-oxo-3-(3-oxo-1-phenylbutyl)-2H-1-benzopyran-4-yl]oxy]propyl]-ω-[3-oxo-3-[[2-oxo-3-(3-oxo-1-phenylbutyl)-2H-1-benzopyran-4-yl]oxy]propoxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



CC 63-5 (Pharmaceuticals)
ST polyethyleneglycol warfarin **conjugation** dissoln pharmacokinetics
IT Drug delivery systems
(carriers; improvement of warfarin biopharmaceutics by **conjugation** with poly(ethylene glycol))
IT Dissolution
(improvement of warfarin biopharmaceutics by **conjugation** with poly(ethylene glycol))
IT Drug delivery systems
(prodrugs; improvement of warfarin biopharmaceutics by **conjugation** with poly(ethylene glycol))
IT **848927-28-6P**
RL: PKT (Pharmacokinetics); PRP (Properties); **SPN (Synthetic preparation)**; THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(improvement of warfarin biopharmaceutics by **conjugation** with poly(ethylene glycol))
IT 129-06-6, Warfarin sodium
RL: PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(improvement of warfarin biopharmaceutics by **conjugation** with poly(ethylene glycol))
IT 81-81-2, Warfarin
RL: RCT (Reactant); RACT (Reactant or reagent)
(improvement of warfarin biopharmaceutics by **conjugation** with poly(ethylene glycol))
IT 37684-51-8P, Polyethyleneglycol disuccinate
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(improvement of warfarin biopharmaceutics by **conjugation** with poly(ethylene glycol))
REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 11 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:1011665 HCAPLUS Full-text

DOCUMENT NUMBER: 142:143246
TITLE: Novel photo-alignment polymer layer capable of charge transport
AUTHOR(S): Lee, Jaemin; Lee, Jeong-Ik; Sung, Shi-Joon; Chu, Hye Yong; Park, Jung-Ki; Shim, Hong-Ku
CORPORATE SOURCE: Department of Chemistry and School of Molecular Science (BK21), Center for Advanced Functional Polymers (CAFPoly), Korea Advanced Institute of Science and Technology (KAIST), Daejeon, 305-701, S. Korea
SOURCE: Macromolecular Chemistry and Physics (2004), 205(16), 2245-2251
CODEN: MCHPES; ISSN: 1022-1352
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English

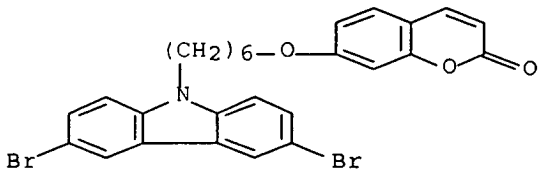
AB With the progress of organic electronics, materials possessing various functionalities are attracting much attention. Here we have synthesized a novel photo-alignment polymer composed of a **conjugated** carbazole main-chain and a coumarin side-chain through nickel(0)-mediated polymerization Carbazole is a well-known hole transporting material and coumarin is also famous for its good photo-alignment properties. The photochem. reactivity of the coumarin side-chain was monitored by UV-vis spectroscopy and the liquid crystal (LC) photo-alignment direction of the polymer film was proved to be perpendicular to the polarization direction of the irradiated UV light. The HOMO (HOMO) level of the polymer, measured from both cyclic voltammetry and photoelectron spectroscopy, was-5.32 eV. Organic light-emitting diodes (OLEDs) of the configuration [ITO/polymer/NPB/Alq3LiF/Al] showed a higher efficiency (2.17%) and brightness (14000 cd m-2) than a control device due to enhanced charge balance.

IT **827033-08-9P**
RL: DEV (Device component use); PRP (Properties); **SPN (Synthetic preparation)**; **PREP (Preparation)**; USES (Uses)
(photo-alignment liquid crystal polymer layer capable of charge transport)

RN 827033-08-9 HCAPLUS
CN 2H-1-Benzopyran-2-one, 7-[[6-(3,6-dibromo-9H-carbazol-9-yl)hexyl]oxy]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 827033-07-8
CMF C27 H23 Br2 N O3



CC 73-4 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 36, 38, 74, 75, 76

IT **827033-08-9P**

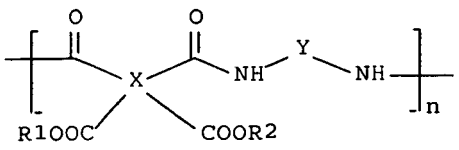
RL: DEV (Device component use); PRP (Properties); **SPN (Synthetic preparation)**; **PREP (Preparation)**; USES (Uses)
(photo-alignment liquid crystal polymer layer capable of charge transport)

REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 12 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:824149 HCAPLUS Full-text
DOCUMENT NUMBER: 141:340542
TITLE: Transparent highly heat-resistant polyimide precursor and photosensitive polyimide composition
INVENTOR(S): Kim, Dong-Seok; Ahn, Yong-Sik; Kim, Kyung-Jun; Yi, Mi-Hie
PATENT ASSIGNEE(S): LG Chem Ltd., S. Korea
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004086146	A1	20041007	WO 2004-KR640	200403 24
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
KR 2004083610	A	20041006	KR 2003-18127	200303 24
CN 1764872	A	20060426	CN 2004-80008080	200403 24
JP 2006521452	T	20060921	JP 2006-507769	200403 24
US 2007093640	A1	20070426	US 2005-550591	200509 23
PRIORITY APPLN. INFO.:			KR 2003-18127 A	200303 24
			WO 2004-KR640 W	

GI



I

AB The present invention relates to an aqueous alkali-developable photosensitive polyimide precursor resin composition that is appropriate for highly heat-resistant transparent protection layers and insulation layers for liquid crystal display devices. In more detail, the present invention relates to a neg.-type photosensitive transparent polyimide precursor·resin composition manufactured in two steps. The first step is the manufacture of a transparent linear polyamic acid (A) from (a-1) one or more kinds of tetracarboxylic acid dianhydrides selected from alicyclic tetracarboxylic acid dianhydrides having 3-30 carbon atoms; and (a-2) one or more kinds of diamines selected from aliphatic, alicyclic, or non- **conjugated** aromatic diamines, having 3-30 carbon atoms, having one or more ethylenically unsatd. bonds at side chains as essential components; and the second step is the manufacture of reactive transparent polyimide precursors shown in the following chemical formula I (X = tetra-valent organic group derived from C3-30-alycyclic tetracarboxylic acid dianhydrides; Y = di-valent organic group derived from C3-30-aliphatic, alicyclic, or non-**conjugated** aromatic diamines; R1, R2 = H, or C1-20-organic groups), as according to the esterification reaction of the above polyamic acid (A) with ethylenically unsatd. compound (B) containing an epoxy group in the same mol. as the main component. The photosensitive transparent polyimide precursor resin compns. according to the present invention have a superior photosensitivity, and thus, may be used for transparent protection layers and insulation layers of liquid crystal display devices having superior heat resistance, chemical resistance, mech. strength, and electricity insulation.

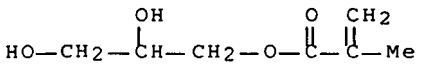
IT **773114-30-0P**
RL: PRP (Properties); **SPN (Synthetic preparation)**; TEM (Technical or engineered material use); **PREP (Preparation)** ; USES (Uses)
(transparent highly heat-resistant polyimide precursor and photosensitive polyimide composition)

RN 773114-30-0 HCAPLUS

CN Benzoic acid, 3,5-diamino-, 2-oxo-2H-1-benzopyranyl ester, polymer with tetrahydrocyclobuta[1,2-c:3,4-c']difurantetrone, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester (9CI) (CA INDEX NAME)

CM 1

CRN 5919-74-4
CMF C7 H12 O4

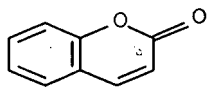


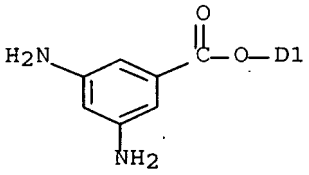
CM 2

CRN 773114-29-7
CMF (C16 H12 N2 O4 . C8 H4 O6)x
CCI PMS

CM 3

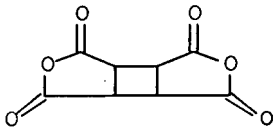
CRN 773114-28-6
CMF C16 H12 N2 O4
CCI IDS





CM 4

CRN 4415-87-6
CMF C8 H4 O6



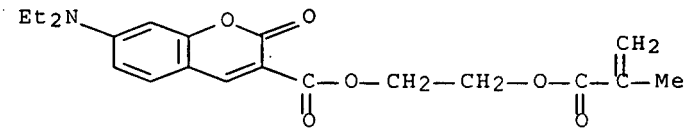
IC ICM G03F007-038
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38
IT 771563-52-1P, 1,2,3,4-Cyclobutanetetracarboxylic acid dianhydride-2-(methacryloyloxy)ethyl 3,5-diaminobenzoate copolymer ester with glycidyl methacrylate 771563-55-4P 771563-56-5P 771563-59-8P **773114-30-0P**
RL: PRP (Properties); **SPN (Synthetic preparation)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(transparent highly heat-resistant polyimide precursor and

photosensitive polyimide composition)
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 13 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:696708 HCAPLUS Full-text
DOCUMENT NUMBER: 142:393059
TITLE: Photo- and electroluminescent properties of methacrylates containing carbazole and coumarin pendant groups
AUTHOR(S): Bogdal, Dariusz; Stepien, Izabela; Sanetra, Jerzy
CORPORATE SOURCE: Department of Chemistry, Politechnika Krakowska, Krakow, 31-155, Pol.
SOURCE: Polish Journal of Chemical Technology (2003), 5(3), 93-95
CODEN: PJCTAP; ISSN: 1509-8117
PUBLISHER: Technical University of Szczecin, Publishing House
DOCUMENT TYPE: Journal
LANGUAGE: English

AB **Conjugated** polymer electroluminescence (EL) and photoluminescence (PL) is an integral part of optoelectronic science. It attracts more and more interest, which reflects in many applications such as LEDs, lighting, indicators, and displays. This kind of polymers is also used in liquid crystals and organic nonlinear optical materials, and some of them are expected to be small monochromatic passively addressed displays such as: mobile phones, and possibly backlights for liquid crystals displays. 2-(9-Carbazolyl)ethyl methacrylate (CEM) and 7-diethyl-aminocoumarin- 3-carboxylic acid 2-(methacryloyloxy)ethyl ester (MK) were synthesized and then copolymd. to give (99.5:0.5), (99:1), (98:2), and (92:8 mol/mol) CEM/MK copolymers. The phys. examns. for absorption and photo- and electroluminescence were conducted, and confirmed that these polymers should be used in opto-electronic industry.

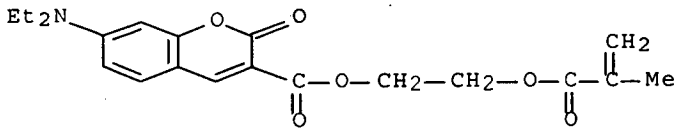
IT **298198-05-7**
RL: PRP (Properties); RCT (Reactant); **RACT (Reactant or reagent)**
(monomer; photo and electroluminescent copolymers of methacrylates containing carbazole and coumarin pendant groups)
RN 298198-05-7 HCAPLUS
CN 2H-1-Benzopyran-3-carboxylic acid, 7-(diethylamino)-2-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester (9CI) (CA INDEX NAME)



IT **298198-06-8P**
RL: PRP (Properties); **SPN (Synthetic preparation)**; **PREP (Preparation)**
(photo and electroluminescent copolymers of methacrylates containing carbazole and coumarin pendant groups)
RN 298198-06-8 HCAPLUS
CN 2H-1-Benzopyran-3-carboxylic acid, 7-(diethylamino)-2-oxo-, 2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethyl ester, polymer with 2-(9H-carbazol-9-yl)ethyl 2-methyl-2-propenoate (CA INDEX NAME)

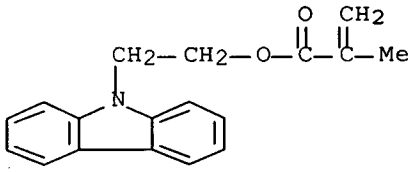
CM 1

CRN 298198-05-7
CMF C20 H23 N O6



CM 2

CRN 15657-91-7
CMF C18 H17 N O2



CC 37-5 (Plastics Manufacture and Processing)
Section cross-reference(s): 35, 73, 76
IT **298198-05-7**
RL: PRP (Properties); RCT (Reactant); **RACT (Reactant or reagent)**
(**monomer**; photo and electroluminescent copolymers of methacrylates containing carbazole and coumarin pendant groups)
IT 29692-07-7P **298198-06-8P**
RL: PRP (Properties); **SPN (Synthetic preparation)**; **PREP (Preparation)**
(photo and electroluminescent copolymers of methacrylates containing carbazole and coumarin pendant groups)
REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 14 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:650822 HCAPLUS Full-text
DOCUMENT NUMBER: 132:28588
TITLE: Photoluminescent polymer films for display applications
AUTHOR(S): Palmans, Anja; Montali, Andrea; Weder, Christoph; Smith, Paul
CORPORATE SOURCE: Department of Materials, Institute of Polymers, ETH Zurich, Zurich, CH-8092, Switz.
SOURCE: Materials Research Society Symposium Proceedings (1999), 560(Luminescent Materials), 265-270
CODEN: MRSPDH; ISSN: 0272-9172
PUBLISHER: Materials Research Society

DOCUMENT TYPE: Journal
LANGUAGE: English

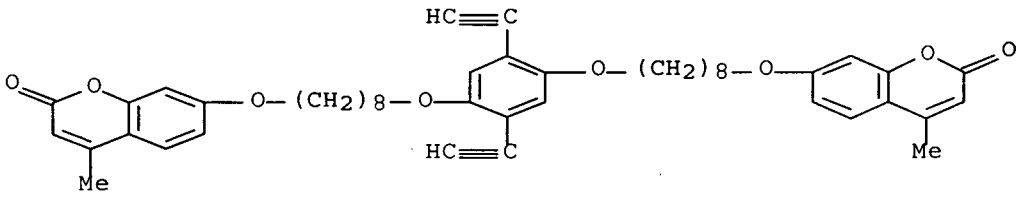
AB Novel poly(p-phenylene ethynylene) polymers, ANT-OPPE and COU-OPPE, have been prepared, in which anthracene and coumarin sensitizer mols. are covalently attached to the **conjugated** polymer backbone via a flexible spacer. These polymers show efficient energy transfer from the sensitizer mol. to the PPE backbone, both in dilute solution as well as in an oriented polyethylene matrix. In case of ANT-OPPE, we found that the PPE backbone adapts to the orientation of the matrix and is efficiently oriented, while the anthracene moiety remains essentially isotropic, resulting in a state-of-the-art polarizing energy transfer for this system.

IT **251991-28-3P 251991-29-4P**
RL: **SPN (Synthetic preparation)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(photoluminescent polymer films for display applications)

RN 251991-28-3 HCAPLUS
CN 2H-1-Benzopyran-2-one, 7,7'-[(2,5-diethynyl-1,4-phenylene)bis(oxy-8,1-octanediyloxy)]bis[4-methyl-, polymer with 1,4-diiodo-2,5-bis(octyloxy)benzene (9CI) (CA INDEX NAME)

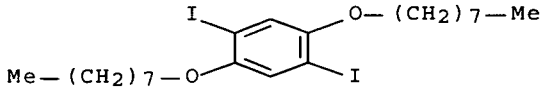
CM 1

CRN 251991-27-2
CMF C46 H50 O8



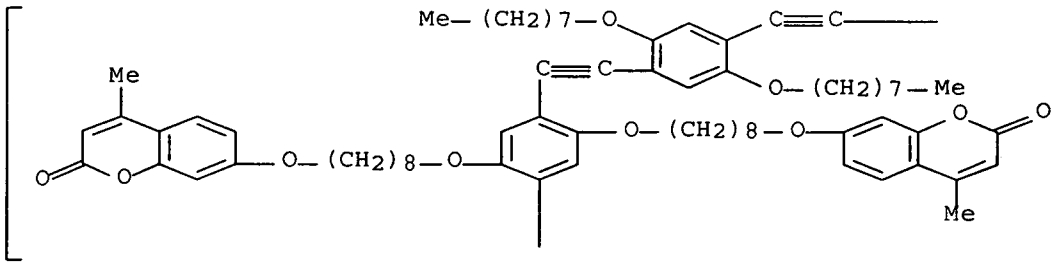
CM 2

CRN 145483-68-7
CMF C22 H36 I2 O2

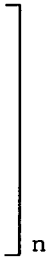


RN 251991-29-4 HCAPLUS
CN Poly[[2,5-bis[[8-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)oxy]octyl]oxy]-1,4-phenylene]-1,2-ethynediyl[2,5-bis(octyloxy)-1,4-phenylene]-1,2-ethynediyl] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35, 38, 73
IT **251991-28-3P 251991-29-4P** 251991-31-8P
251991-32-9P
RL: **SPN (Synthetic preparation)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(photoluminescent polymer films for display applications)
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 15 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:377087 HCAPLUS Full-text
DOCUMENT NUMBER: 131:170713
TITLE: Polarizing Energy Transfer in Photoluminescent **Conjugated** Polymers with Covalently Attached Sensitizers
AUTHOR(S): Palmans, Anja R. A.; Smith, Paul; Weder, Christoph
CORPORATE SOURCE: Department of Materials Institute of Polymers, ETH Zuerich, Zurich, CH-8092, Switz.
SOURCE: Macromolecules (1999), 32(14), 4677-4685
CODEN: MAMOBX; ISSN: 0024-9297
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A class of poly(p-phenylene ethynylene) (PPE) polymers, COU-OPPE and ANT-OPPE, were prepared, in which coumarin- and anthracene-based sensitizer mols. are covalently linked to the **conjugated** polymer backbone via a flexible spacer.

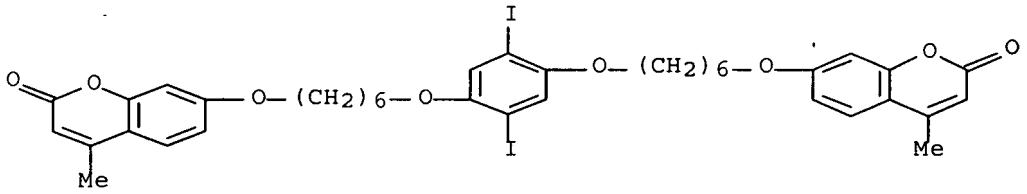
In dilute solns. of these polymers, efficient resonance energy transfer is observed from the sensitizer moieties to the PPE backbone, resulting in enhanced luminescence of the PPE macromols. When incorporated as guests in oriented polyethylene films, the novel polymers, COU-OPPE and ANT-OPPE, show efficient energy transfer from the pendent sensitizer to the PPE backbone. Especially in the case of ANT-OPPE, the PPE backbone is efficiently oriented while the anthracene moiety remains essentially isotropic, which results in a high degree of polarizing energy transfer for this system. The properties of these **conjugated** polymers are suitable for use in light-emitting diodes (LED's).

IT **238421-16-4P 238421-19-7P**
RL: PRP (Properties); **SPN (Synthetic preparation)**; **PREP (Preparation)**
(COU-OPPE; preparation of sensitizer-containing **monomers** and poly(phenyl-acetylene) photoluminescent **conjugated** polymers with enhanced polarizing energy transfer)

RN 238421-16-4 HCAPLUS
CN 2H-1-Benzopyran-2-one, 7,7'-[(2,5-diiodo-1,4-phenylene)bis(oxy-6,1-hexanediyloxy)]bis[4-methyl-, polymer with 1,4-diethynyl-2,5-bis(octyloxy)benzene (9CI) (CA INDEX NAME)

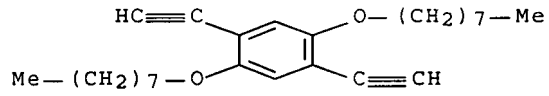
CM 1

CRN 238421-15-3
CMF C38 H40 I2 O8



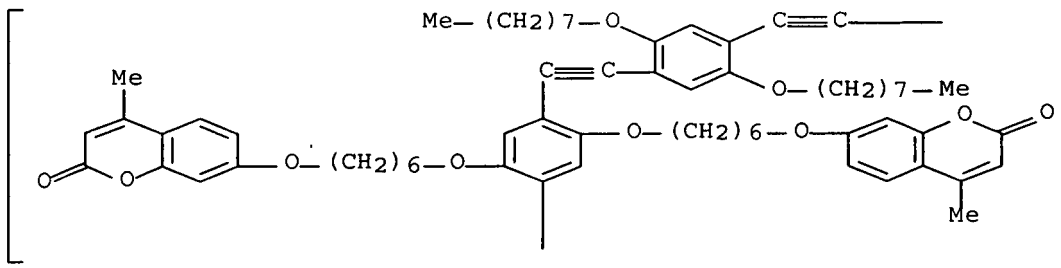
CM 2

CRN 153033-27-3
CMF C26 H38 O2



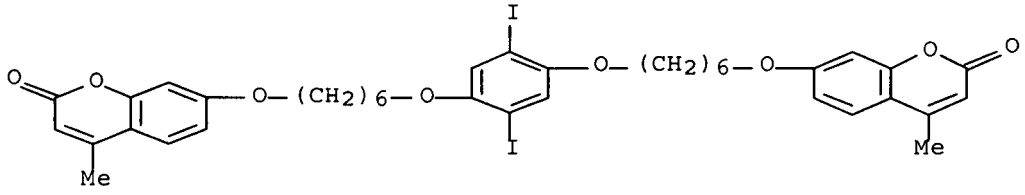
RN 238421-19-7 HCAPLUS
CN Poly[[2,5-bis[[6-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)oxy]hexyl]oxy]-1,4-phenylene]-1,2-ethynediyl[2,5-bis(octyloxy)-1,4-phenylene]-1,2-ethynediyl] (9CI) (CA INDEX NAME)

PAGE 1-A

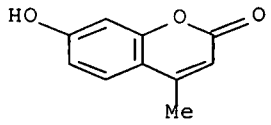


PAGE 1-B

IT **238421-15-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(intermediate and **monomer**; preparation of sensitizer-containing **monomers** and poly(phenyl-acetylene) photoluminescent **conjugated** polymers with enhanced polarizing energy transfer)
RN 238421-15-3 HCAPLUS
CN 2H-1-Benzopyran-2-one, 7,7'-[(2,5-diiodo-1,4-phenylene)bis(oxy-6,1-hexanediyloxy)]bis[4-methyl- (9CI) (CA INDEX NAME)



IT **90-33-5**, 7-Hydroxy-4-methylcoumarin
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(preparation of sensitizer-containing **monomers** and poly(phenyl-acetylene) photoluminescent **conjugated** polymers with enhanced polarizing energy transfer)
RN 90-33-5 HCAPLUS
CN 2H-1-Benzopyran-2-one, 7-hydroxy-4-methyl- (CA INDEX NAME)



CC 35-7 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 36, 74
ST polyphenylene ethynylene coumarin sensitizer prepn photoluminescence; anthracene photosensitizer polyphenylene ethynylene polarizing energy transfer; polyacetylene polyphenylene **conjugated** polymer covalent photosensitizer
IT Polymerization
(Heck cross-coupling; preparation of sensitizer-containing **monomers** and poly(phenyl-acetylene) photoluminescent **conjugated** polymers with enhanced polarizing energy transfer)
IT Cross-coupling reaction
(Heck; preparation of sensitizer-containing **monomers** and poly(phenyl-acetylene) photoluminescent **conjugated** polymers with enhanced polarizing energy transfer)
IT Polymers, preparation
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(**conjugated**; preparation of sensitizer-containing **monomers** and poly(phenyl-acetylene) photoluminescent **conjugated** polymers with enhanced polarizing energy transfer)
IT Polarized light
(isotropic; preparation of sensitizer-containing **monomers** and poly(phenyl-acetylene) photoluminescent **conjugated** polymers with enhanced polarizing energy transfer)
IT Polymer chains
(orientation; preparation of sensitizer-containing **monomers** and poly(phenyl-acetylene) photoluminescent **conjugated** polymers with enhanced polarizing energy transfer)
IT Photochemistry
(photosensitizers; preparation of sensitizer-containing **monomers** and poly(phenyl-acetylene) photoluminescent **conjugated** polymers with enhanced polarizing energy transfer)
IT Polyphenyls
Polyphenyls
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(polyacetylene-, coumarin and anthracene containing; preparation of sensitizer-containing **monomers** and poly(phenyl-acetylene) photoluminescent **conjugated** polymers with enhanced polarizing energy transfer)
IT Polyacetylenes, preparation
Polyacetylenes, preparation
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(polyphenyl-, coumarin and anthracene containing; preparation of sensitizer-containing **monomers** and poly(phenyl-acetylene) photoluminescent **conjugated** polymers with enhanced polarizing energy transfer)
IT Alkylation
Luminescence

Optical absorption
Photoinduced energy transfer
Resonance energy
(preparation of sensitizer-containing **monomers** and poly(phenyl-acetylene) photoluminescent **conjugated** polymers with enhanced polarizing energy transfer)

IT Polymer blends
RL: PRP (Properties)
(preparation of sensitizer-containing **monomers** and poly(phenyl-acetylene) photoluminescent **conjugated** polymers with enhanced polarizing energy transfer)

IT 238421-18-6P 238421-20-0P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(ANT-OPPE; preparation of sensitizer-containing **monomers** and poly(phenyl-acetylene) photoluminescent **conjugated** polymers with enhanced polarizing energy transfer)

IT **238421-16-4P 238421-19-7P**
RL: PRP (Properties); **SPN (Synthetic preparation)**; **PREP (Preparation)**
(COU-OPPE; preparation of sensitizer-containing **monomers** and poly(phenyl-acetylene) photoluminescent **conjugated** polymers with enhanced polarizing energy transfer)

IT 173428-83-6P 174592-87-1P
RL: PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation)
(EHO-OPPE; preparation of sensitizer-containing **monomers** and poly(phenyl-acetylene) photoluminescent **conjugated** polymers with enhanced polarizing energy transfer)

IT 85389-89-5P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(MOC; preparation of sensitizer-containing **monomers** and poly(phenyl-acetylene) photoluminescent **conjugated** polymers with enhanced polarizing energy transfer)

IT 71942-30-8P, Propyl 9-Anthracenecarboxylate
RL: PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation)
(PAC; preparation of sensitizer-containing **monomers** and poly(phenyl-acetylene) photoluminescent **conjugated** polymers with enhanced polarizing energy transfer)

IT 14221-01-3, Tetrakis(triphenylphosphine)palladium
RL: CAT (Catalyst use); USES (Uses)
(coupling catalyst; preparation of sensitizer-containing **monomers** and poly(phenyl-acetylene) photoluminescent **conjugated** polymers with enhanced polarizing energy transfer)

IT 9002-88-4, Polyethylene
RL: NUU (Other use, unclassified); USES (Uses)
(host, polyacetylene-polyphenyl blends; preparation of sensitizer-containing **monomers** and poly(phenyl-acetylene) photoluminescent **conjugated** polymers with enhanced polarizing energy transfer)

IT **238421-15-3P** 238421-17-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(intermediate and **monomer**; preparation of sensitizer-containing **monomers** and poly(phenyl-acetylene) photoluminescent **conjugated** polymers with enhanced polarizing energy transfer)

IT 238421-14-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of sensitizer-containing **monomers** and poly(phenyl-acetylene) photoluminescent **conjugated** polymers with enhanced polarizing energy transfer)

IT **90-33-5**, 7-Hydroxy-4-methylcoumarin 110-54-3, Hexane, reactions 111-87-5, 1-Octanol, reactions 591-50-4, Iodobenzene 723-62-6, 9-Anthracenecarboxylic acid 1972-28-7, Diethylazodicarboxylate 4286-55-9 13064-64-7, 1,4-Dihydroxy-2,5-diiodobenzene 153033-27-3, 1,4-Bis(ethynyl)-2,5-di(octyloxy)benzene
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(preparation of sensitizer-containing **monomers** and poly(phenyl-acetylene) photoluminescent **conjugated** polymers with enhanced polarizing energy transfer)

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 16 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1996:625928 HCAPLUS Full-text
DOCUMENT NUMBER: 125:248597
TITLE: Copolymers derived from 7-acryloyloxy-4-methylcoumarin and acrylates: 1. Copolymerizability and photocrosslinking behaviors
AUTHOR(S): Chen, Yun; Geh, Juin Lyang
CORPORATE SOURCE: Dep. Chem. Eng., Natl. Cheng Kung Univ., Tainan, 701, Taiwan
SOURCE: Polymer (1996), 37(20), 4473-4480
CODEN: POLMAG; ISSN: 0032-3861
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Photoreactive copolymers containing 4-methylcoumarin pendant groups were prepared by radical copolymn. of 7-acryloyloxy-4-methylcoumarin (M1) with acrylates [M2 = Me methacrylate (MMA), Me acrylate (MA), Et acrylate (EA) and Bu acrylate (BA)] in DMF at 65° using AIBN as initiator. The **monomer** reactivity ratios (MRRs) of M1 and M2 were estimated by the Fineman-Ross and Kelen-Tudos methods, by analyzing copolymer compns. which were determined by 1H NMR spectra. The MRRs are r1 = 0.45, r2 = 1.68 for M1-MMA; r1 = 2.16, r2 = 0.48 for M1-MA; r1 = 2.04, r2 = 0.42 for M1-EA; and r1 = 1.82, r2 = 0.53 for M1-BA, resp. The order of **monomer** reactivity estimated from 1/r1 values is MMA > M1 > BA > EA > MA. The higher reactivity of MMA can be attributed to its extra hyperconjugating stabilization by Me groups in addition to C=O **conjugation.** 13C NMR spectra showed that π-electron d. of the β-carbon is in the order of MA > EA > BA > M1. The lower electron d. of β-carbons in a **monomer** leads to easier electron transfer from propagating radical to the **monomer** and consequently a higher reactivity. Photocrosslinking (300 nm) of the copolymers in the film state were investigated by their characteristic curves (W/W0 vs. time plot).

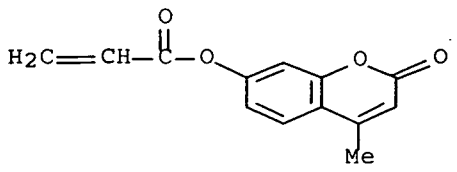
IT **182320-77-0P 182320-78-1P 182320-79-2P 182320-80-5P**
RL: PEP (Physical, engineering or chemical process); **SPN (Synthetic preparation)**; **PREP (Preparation)**; PROC (Process)
(preparation and photocrosslinking of acrylate-7-acryloyloxy-4-methylcoumarin copolymers)

RN 182320-77-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with

4-methyl-2-oxo-2H-1-benzopyran-7-yl 2-propenoate (9CI) (CA INDEX NAME)

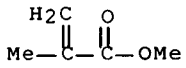
CM 1

CRN 35544-21-9
CMF C13 H10 O4



CM 2

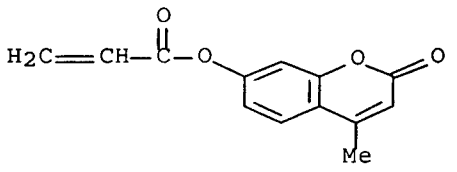
CRN 80-62-6
CMF C5 H8 O2



RN 182320-78-1 HCAPLUS
CN 2-Propenoic acid, methyl ester, polymer with 4-methyl-2-oxo-2H-1-benzopyran-7-yl 2-propenoate (9CI) (CA INDEX NAME)

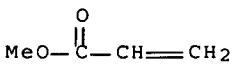
CM 1

CRN 35544-21-9
CMF C13 H10 O4



CM 2

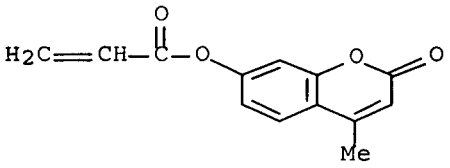
CRN 96-33-3
CMF C4 H6 O2



RN 182320-79-2 HCAPLUS
CN 2-Propenoic acid, ethyl ester, polymer with 4-methyl-2-oxo-2H-1-benzopyran-7-yl 2-propenoate (9CI) (CA INDEX NAME)

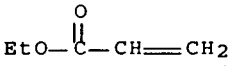
CM 1

CRN 35544-21-9
CMF C13 H10 O4



CM 2

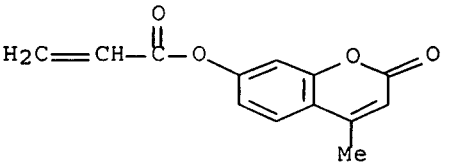
CRN 140-88-5
CMF C5 H8 O2



RN 182320-80-5 HCAPLUS
CN 2-Propenoic acid, butyl ester, polymer with 4-methyl-2-oxo-2H-1-benzopyran-7-yl 2-propenoate (9CI) (CA INDEX NAME)

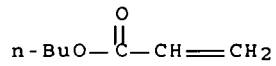
CM 1

CRN 35544-21-9
CMF C13 H10 O4

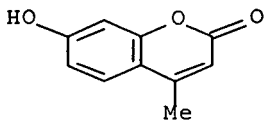


CM 2

CRN 141-32-2
CMF C7 H12 O2



IT **90-33-5**, 7-Hydroxy-4-methylcoumarin
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(starting material; reactivity ratios in polymerization of 7-acryloyloxy-4-methylcoumarin with acrylates)
RN 90-33-5 HCAPLUS
CN 2H-1-Benzopyran-2-one, 7-hydroxy-4-methyl- (CA INDEX NAME)



CC 35-3 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 74
IT **182320-77-0P 182320-78-1P 182320-79-2P 182320-80-5P**
RL: PEP (Physical, engineering or chemical process); **SPN (Synthetic preparation)**; **PREP (Preparation)**; PROC (Process)
(preparation and photocrosslinking of acrylate-7-acryloyloxy-4-methylcoumarin copolymers)
IT **90-33-5**, 7-Hydroxy-4-methylcoumarin
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(starting material; reactivity ratios in polymerization of 7-acryloyloxy-4-methylcoumarin with acrylates)

L22 ANSWER 17 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1996:393829 HCAPLUS Full-text
DOCUMENT NUMBER: 125:25818
TITLE: Synthesis and immunotropic activity of benzopyran-2-one derivatives
AUTHOR(S): Abyshev, A. Z.; Nezhinskaya, G. I.; Melikov, K. Ch.
CORPORATE SOURCE: Inst. Vaktsin i Syvorotok, St. Petersburg, Russia
SOURCE: Khimiko-Farmatsevticheskii Zhurnal (1994), 28(11), 20-22
CODEN: KHFZAN; ISSN: 0023-1134
PUBLISHER: Meditsina
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Copolymers of the benzopyrane series (CP-I-V) have been demonstrated to show different immunotropic activity in relation to the composition of comonomers, structure, mol. mass, hydrophilic and hydrophobic properties. Thus, CP-I and CP-V may be classified as thymus-independent antigens in the magnitude of their action on murine immune responses. The higher hydrophilic capacity of a CP-V mol. has an effect on B lymphocytes, resulting in a reduction of the murine splenic count of the antibody-forming cells. The inclusion of imidazole, benzimidazole and other heterocycles into the polymer chain makes CP-II and CP-III close to thymus-dependent antigens, which appears as elevated murine splenic levels of E-rosette-forming cells. That of a maleimide

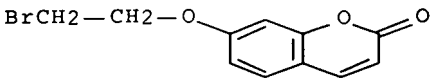
fragment gives rise to **conjugated** compds. with various antigens. Immunization of rabbits with the **conjugates** yields antibodies with a titer of 1:25,000±521. The findings indicate that there are common features for all the compds. tested, namely: they have an intensifying effect on humoral immune responses, the presence of T lymphocytes with histamine receptors, enhanced T-suppressor activity of lymphocytes, the appearance of sufficient quantities of macrophageal immature forms.

IT **90818-61-4P 177851-19-3P 177851-20-6P**
177851-22-8P 177851-23-9P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); **SPN (Synthetic preparation)**; BIOL (Biological study); **PREP (Preparation)**
(synthesis and immunotropic activity of benzopyranone derivs.)

RN 90818-61-4 HCAPLUS
CN 2-Pyrrolidinone, 1-ethenyl-, polymer with 7-(2-bromoethoxy)-2H-1-benzopyran-2-one (9CI) (CA INDEX NAME)

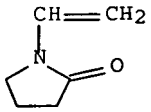
CM 1

CRN 90818-60-3
CMF C11 H9 Br O3



CM 2

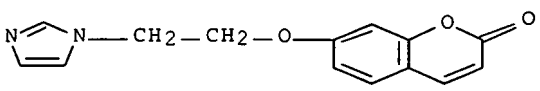
CRN 88-12-0
CMF C6 H9 N O



RN 177851-19-3 HCAPLUS
CN 2-Pyrrolidinone, 1-ethenyl-, polymer with 7-[2-(1H-imidazol-1-yl)ethoxy]-2H-1-benzopyran-2-one (9CI) (CA INDEX NAME)

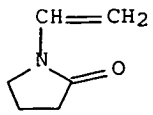
CM 1

CRN 177851-18-2
CMF C14 H12 N2 O3



CM 2

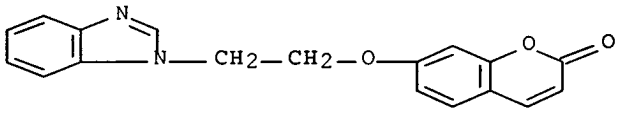
CRN 88-12-0
CMF C6 H9 N O



RN 177851-20-6 HCAPLUS
CN 2-Pyrrolidinone, 1-ethenyl-, polymer with 7-[2-(1H-benzimidazol-1-yl)ethoxy]-2H-1-benzopyran-2-one (9CI) (CA INDEX NAME)

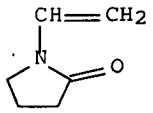
CM 1

CRN 155272-62-1
CMF C18 H14 N2 O3



CM 2

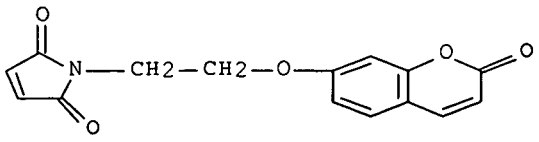
CRN 88-12-0
CMF C6 H9 N O



RN 177851-22-8 HCAPLUS
CN 1H-Pyrrole-2,5-dione, 1-[2-[(2-oxo-2H-1-benzopyran-7-yl)oxy]ethyl]-, polymer with 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

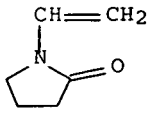
CM 1

CRN 177851-21-7
CMF C15 H11 N O5



CM 2

CRN 88-12-0
CMF C6 H9 N O

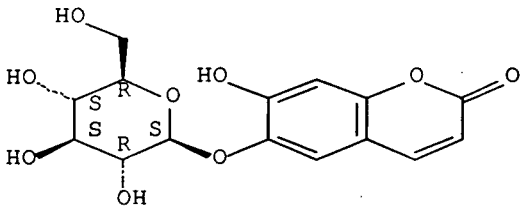


RN 177851-23-9 HCAPLUS
CN 2-Pyrrolidinone, 1-ethenyl-, polymer with 6-(β-D-glucopyranosyloxy)-7-hydroxy-2H-1-benzopyran-2-one (9CI) (CA INDEX NAME)

CM 1

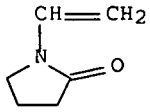
CRN 531-75-9
CMF C15 H16 O9

Absolute stereochemistry.



CM 2

CRN 88-12-0
CMF C6 H9 N O



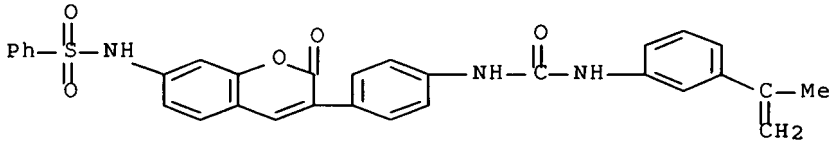
CC 1-7 (Pharmacology)
Section cross-reference(s): 27, 35
IT 91-64-5DP, 2H-1-Benzopyran-2-one, derivs. **90818-61-4P**
177851-19-3P 177851-20-6P 177851-22-8P
177851-23-9P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); **SPN (Synthetic preparation)**; BIOL (Biological study); **PREP (Preparation)**
(synthesis and immunotropic activity of benzopyranone derivs.)

L22 ANSWER 18 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1995:837227 HCAPLUS Full-text
DOCUMENT NUMBER: 124:169727
TITLE: Polymeric fluorescent dyes for labeling of proteins and nucleic acids
AUTHOR(S): Pitschke, M.; Fels, A.; Schmidt, B.; Heiliger, L.; Kuckert, E.; Riesner, D.
CORPORATE SOURCE: Institut Physikalische Biologie, Heinrich-Heine-Universitaet, Duesseldorf, 40255, Germany
SOURCE: Colloid and Polymer Science (1995), 273(8), 740-52
CODEN: CPMSB6; ISSN: 0303-402X
PUBLISHER: Steinkopff
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To increase the sensitivity of fluorescent labeling, a labeling technique with polymeric fluorescent dyes was established and tested for its applicability in biochem. and diagnostics. The fluorescent dye was based on the fluorophore coumarin and was covalently linked to the model proteins streptavidin and IgG. The dye was synthesized by radical polymerization of 3 different types of functional **monomers** to ensure water solubility, covalent coupling to proteins, and fluorescence. The mol. weight range was 20-200 kDa. Fractions of narrow mol. weight distribution were prepared by gel filtration on Superdex 200. The relationship between size and charge of the different fractions was analyzed by gel electrophoresis. Covalent **conjugation** to proteins was carried out by formation of a peptide bond between a carboxylic group of the functional **monomers** and an amino group of the protein mediated by 1-ethyl-3-(3-dimethylamino-propyl)-carbodiimide (EDC). A novel type of gel electrophoresis was developed to analyze and optimize the **conjugation** reaction; the results were in agreement with those from anal. ultracentrifugation with fluorescence detection. Hydrodynamic studies of the uncoupled dye and the protein-dye **conjugates** exhibited a drastic decrease of Stokes radius of the dye due to the coupling to the protein. Under optimum conditions the fluorescence intensity of a protein-polymeric dye **conjugate** was enhanced 40-fold compared to a **monomeric** dye. Biotin binding to the protein streptavidin was not affected by **conjugation** with the polymeric dye. At present, the applicability of the polymeric dye in biochem. and diagnostic reactions seems to be limited due to strong but nonspecific hydrophobic interactions that might be overcome by using fluorescein as **monomeric** dye.
IT **174002-22-3P**
RL: ARG (Analytical reagent use); **SPN (Synthetic preparation)**; ANST (Analytical study); **PREP (Preparation)**; USES (Uses)
(polymeric fluorescent dyes for labeling of proteins and nucleic acids)
RN 174002-22-3 HCAPLUS
CN Benzenesulfonic acid, 4-ethenyl-, polymer with α-(3-carboxy-1-oxopropyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-

ethanediyl) and N-[3-[4-[[[[3-(1-methylethenyl)phenyl]amino]carbonyl]amino]phenyl]-2-oxo-2H-1-benzopyran-7-yl]benzenesulfonamide (9CI) (CA INDEX NAME)

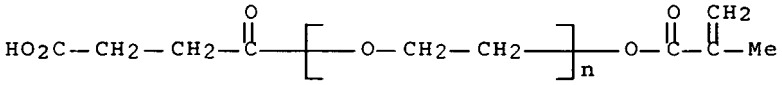
CM 1

CRN 174002-21-2
CMF C31 H25 N3 O5 S



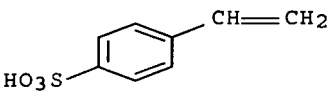
CM 2

CRN 85226-98-8
CMF (C2 H4 O)n C8 H10 O5
CCI PMS

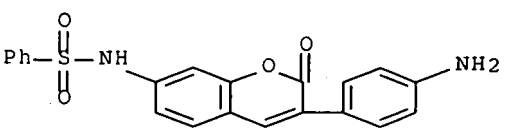


CM 3

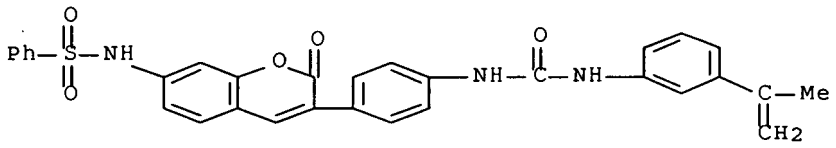
CRN 98-70-4
CMF C8 H8 O3 S



IT **174002-20-1**
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(polymeric fluorescent dyes for labeling of proteins and nucleic acids)
RN 174002-20-1 HCAPLUS
CN Benzenesulfonamide, N-[3-(4-aminophenyl)-2-oxo-2H-1-benzopyran-7-yl]- (CA INDEX NAME)



IT **174002-21-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(polymeric fluorescent dyes for labeling of proteins and nucleic acids)
RN 174002-21-2 HCAPLUS
CN Benzenesulfonamide, N-[3-[4-[[[[3-(1-methylethenyl)phenyl]amino]carbonyl]amino]phenyl]-2-oxo-2H-1-benzopyran-7-yl]- (CA INDEX NAME)



CC 9-5 (Biochemical Methods)
Section cross-reference(s): 3, 41
IT Immunoglobulins
RL: ARG (Analytical reagent use); NUU (Other use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(G, fluorescent dye **conjugates**; polymeric fluorescent dyes for labeling of proteins and nucleic acids)
IT 91-64-5P, Coumarin 9013-20-1DP, Streptavidin, fluorescent dye **conjugates**
RL: ARG (Analytical reagent use); NUU (Other use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(polymeric fluorescent dyes for labeling of proteins and nucleic acids)
IT **174002-22-3P**
RL: ARG (Analytical reagent use); **SPN (Synthetic preparation)**; ANST (Analytical study); **PREP (Preparation)**; USES (Uses)
(polymeric fluorescent dyes for labeling of proteins and nucleic acids)
IT 98-70-4 2094-99-7 25736-86-1, Blemmer PE 350 **174002-20-1**
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(polymeric fluorescent dyes for labeling of proteins and nucleic acids)
IT 85226-98-8P **174002-21-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(polymeric fluorescent dyes for labeling of proteins and nucleic acids)

L22 ANSWER 19 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1994:676195 HCAPLUS Full-text
DOCUMENT NUMBER: 121:276195
TITLE: Biologically active initiators for radical polymerization
INVENTOR(S): Heiliger; Ludger
PATENT ASSIGNEE(S): Bayer A.-G., Germany
SOURCE: Eur. Pat. Appl., 16 pp.
CODEN: EPXXDW

DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 591809	A2	19940413	EP 1993-115566	19930927
EP 591809	A3	19940803		
R: BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE				
DE 4322885	A1	19940414	DE 1993-4322885	19930709
JP 06234806	A	19940823	JP 1993-272939	19931006
US 5534630	A	19960709	US 1994-320597	19941007

PRIORITY APPLN. INFO.:		
DE 1992-4234074	A	19921009
DE 1993-4322885	A	19930709
US 1993-130880	B1	19931004

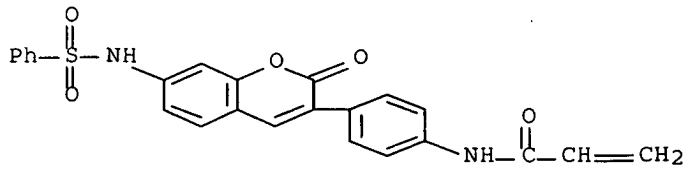
AB Biol. active initiators were prepared with the general structure A-L-B[L-A]y (where A = biol. active part; B = a radical-forming part; L = linker group; and y = 0 or 1, preferably 1). The biol. active part A may be, e.g., biotin, digitoxin, digoxin, digitoxigenin, digoxigenin, and oligonucleotides with 1-80 bases, especially 20-35 bases. The compds. are useful in radical polymerization and for hybridization assays. Thus, an initiator was prepared by reaction of the oligonucleotide ATCCAGTTGTGTCTTCAAC with 4,4'-azobis(4-cyanopentanoic acid hydroxysuccinimidyl ester). The initiator then was used in the preparation of a polymer from Na p-styrylsulfonate and coumarin dye that had an average mol. weight of 500,000 and could be used directly in hybridization tests for the detection of DNA or RNA with a nucleotide sequence complimentary to the oligonucleotide in the initiator.

IT **151137-49-4P**
RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; RACT (Reactant or reagent)
(preparation and **conjugation** with avidin or streptavidin)

RN 151137-49-4 HCAPLUS
CN Benzenesulfonic acid, 4-ethenyl-, sodium salt, polymer with N-[4-[2-oxo-7-[(phenylsulfonyl)amino]-2H-1-benzopyran-3-yl]phenyl]-2-propenamide (9CI) (CA INDEX NAME)

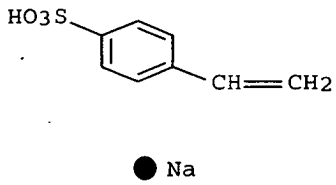
CM 1

CRN 151110-17-7
CMF C24 H18 N2 O5 S



CM 2

CRN 2695-37-6
CMF C8 H8 O3 S . Na



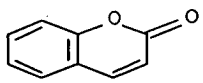
IC ICM C07D519-00
ICS C07H021-00; C07D307-58; C08F004-04; C08F004-34
ICI C07D519-00, C07D495-00
CC 9-14 (Biochemical Methods)
Section cross-reference(s): 3, 35
IT **151137-49-4P**
RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; RACT (Reactant or reagent)
(preparation and **conjugation** with avidin or streptavidin)
IT 134469-94-6DP, oligonucleotide **conjugates** 158052-96-1P
158052-97-2P 158052-98-3DP, oligonucleotide **conjugates**
158052-99-4P 158053-00-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as biol. active initiator for radical polymerization)

L22 ANSWER 20 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1990:36485 HCAPLUS Full-text
DOCUMENT NUMBER: 112:36485
TITLE: [2+2]Photocyclization and photoreversion in polymer chemistry
AUTHOR(S): Saigo, Kazuhiko
CORPORATE SOURCE: Fac. Eng., Univ. Tokyo, Tokyo, 113, Japan
SOURCE: Yuki Gosei Kagaku Kyokaishi (1989), 47(11), 1006-16
CODEN: YGKKAE; ISSN: 0037-9980
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review with 54 refs. on solid-phase photochem. crosslinking reactions, solid-phase photopolymn. of **conjugated** diolefins, liquid-phase photochem. [2 + 2]-cyloaddn. polymerization of diolefins, polymers containing photocyclodimers, and coumarin dimer-based polyamides.
IT **26762-76-5DP**, Coumarin dimer, polymers with diamines
RL: PRP (Properties); **SPN (Synthetic preparation)**;

PREP (Preparation)
(preparation and properties of)
RN 26762-76-5 HCAPLUS
CN 2H-1-Benzopyran-2-one, dimer (9CI) (CA INDEX NAME)

CM 1

CRN 91-64-5
CMF C9 H6 O2



CC 35-0 (Chemistry of Synthetic High Polymers)
IT Polymerization
(photochem., solid-state, of **conjugated** diolefins)
IT **26762-76-5DP**, Coumarin dimer, polymers with diamines
RL: PRP (Properties); **SPN (Synthetic preparation)**;
PREP (Preparation)
(preparation and properties of)

=> d l24 ibib abs hitstr hitind 1-18

L24 ANSWER 1 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:658152 HCAPLUS Full-text
DOCUMENT NUMBER: 147:257677
TITLE: Shape-persistent macrocycles: a synthetic strategy that combines easy and site-specific decorations with improved cyclization efficiency
AUTHOR(S): Sakamoto, Junji; Schluter, A. Dieter
CORPORATE SOURCE: Department of Materials, Institute of Polymers, ETH Zurich, Zurich, 8093, Switz.
SOURCE: European Journal of Organic Chemistry (2007), (16), 2700-2712
CODEN: EJOCFK; ISSN: 1434-193X
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 147:257677
GI

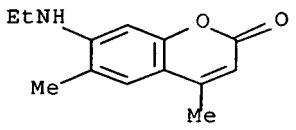
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A flexible route to shape-persistent macrocycles based 5,5'-diphenyl-2,2'-bipyridine moieties connected by 1,3-phenylenebis-ethynyl bridges and **conjugated** with coumarin dyes was devised; the synthetic route allows easy introduction of several different functional units at predetd. positions and the preparation of cycles as anal. pure materials in high isolated yields of 22-45% in the final cyclization process. Each step of the assembly process is based on high-yielding and robust Suzuki- and Sonogashira-type cross-coupling reactions. Coumarin-containing blocks **conjugated** with m-phenylene spacers, I and II , M1C6H3-3-C.tplbond.CR1-5-C.tplbond.CR2 and M2C6H3-3-C.tplbond.CR1-5-

C.tplbond.CR2, resp., (6, 7, R1 = H, R2 = TIPS) were prepared starting from 3,5-dibromobenzyl alc.; Sonogashira coupling of 6 and 7 with (5,5'-bis(3-hexyloxymethyl)-5-iodophenyl)- 2,2'-bipyridine (8b) gave the macrocycle **precursors** (19, 21; shown as I, II, resp., a R2 = TIPS, b R2 = H; R1 = 1/2[5,5'-bis[(5-hexyloxymethyl)-1,3-phenylene]-2,2'-bipyridine]). Mixed **precursors**, containing both types of coumarin dyes (20, 22) were also prepared by stepwise Sonogashira coupling. Macrocyclization of the **precursors** 19-22 with 8b afforded the macrocyclic compds., M1,2C6H3-3,5-[C.tplbond.C-1,3-[5-X-C6H3]- 5,5'-[2,2'-C5H3NC5H3N]-1,3-[5-X-C6H3]C.tplbond.C]2-3,5-C6H3M1,2 (1-3; X = C6H13OCH2). In the Sonogashira coupling, the best results were obtained in the absence of Cu(I) iodide and with relatively large amts. of a palladium catalyst **precursor.** The products of coupling and macrocyclization reactions were separated by preparative gel-permeation chromatog. that allows the separation of large amts. of compds. in a limited time.

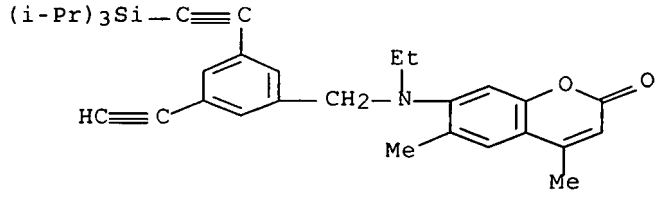
IT **26078-25-1**
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(preparation of 1,3-phenylenediethynyl-bridged 2,2'-bipyridine macrocycles **conjugated** with coumarin dyes by Suzuki and Sonogashira coupling and macrocyclization)

RN 26078-25-1 HCAPLUS
CN 2H-1-Benzopyran-2-one, 7-(ethylamino)-4,6-dimethyl- (CA INDEX NAME)

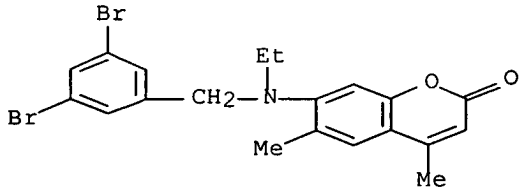


IT **945867-03-8P 945867-05-0P 945867-06-1P**
945867-07-2P 945867-11-8P 945867-12-9P
945867-15-2P 945867-19-6P 945867-20-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation of 1,3-phenylenediethynyl-bridged 2,2'-bipyridine macrocycles **conjugated** with coumarin dyes by Suzuki and Sonogashira coupling and macrocyclization)

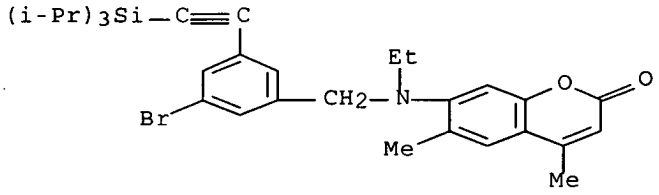
RN 945867-03-8 HCAPLUS
CN 2H-1-Benzopyran-2-one, 7-[ethyl[[3-ethynyl-5-[2-[tris(1-methylethyl)silyl]ethynyl]phenyl]methyl]amino]-4,6-dimethyl- (CA INDEX NAME)



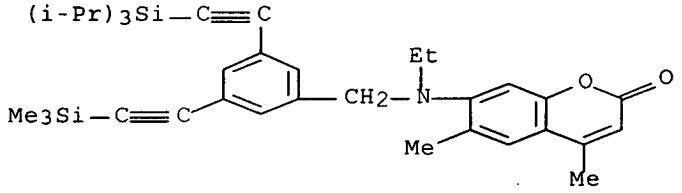
RN 945867-05-0 HCAPLUS
CN 2H-1-Benzopyran-2-one, 7-[[(3,5-dibromophenyl)methyl]ethylamino]-4,6-dimethyl- (CA INDEX NAME)



RN 945867-06-1 HCAPLUS
CN 2H-1-Benzopyran-2-one, 7-[[[3-bromo-5-[2-[tris(1-methylethyl)silyl]ethynyl]phenyl]methyl]ethylamino]-4,6-dimethyl- (CA INDEX NAME)

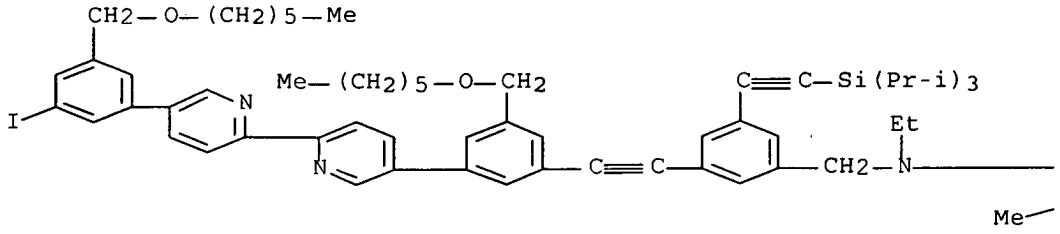


RN 945867-07-2 HCAPLUS
CN 2H-1-Benzopyran-2-one, 7-[ethyl[[3-[2-(trimethylsilyl)ethynyl]-5-[2-[tris(1-methylethyl)silyl]ethynyl]phenyl]methyl]amino]-4,6-dimethyl- (CA INDEX NAME)

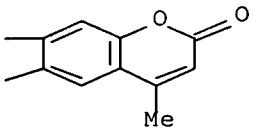


RN 945867-11-8 HCAPLUS
CN 2H-1-Benzopyran-2-one, 7-[ethyl[[3-[2-[3-[(hexyloxy)methyl]-5-[5'-[3-[(hexyloxy)methyl]-5-iodophenyl][2,2'-bipyridin]-5-yl]phenyl]ethynyl]-5-[2-[tris(1-methylethyl)silyl]ethynyl]phenyl]methyl]amino]-4,6-dimethyl- (CA INDEX NAME)

PAGE 1-A

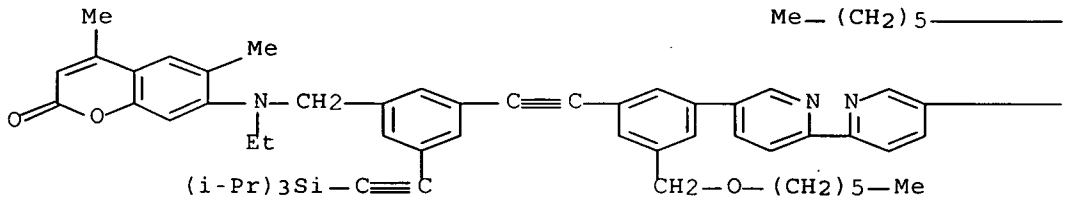


PAGE 1-B

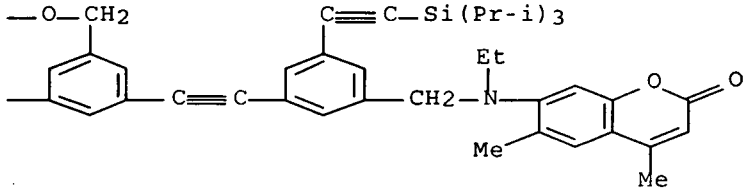


RN 945867-12-9 HCAPLUS
CN 2H-1-Benzopyran-2-one, 7,7'-[[2,2'-bipyridine]-5,5'-diylbis[[5-[(hexyloxy)methyl]-3,1-phenylene]-2,1-ethynediyl[5-[2-[tris(1-methylethyl)silyl]ethynyl]-3,1-phenylene]methylene(ethylimino)]]bis[4,6-dimethyl- (CA INDEX NAME)

PAGE 1-A

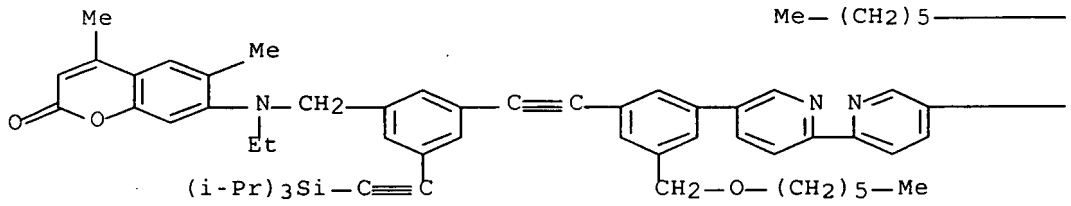


PAGE 1-B

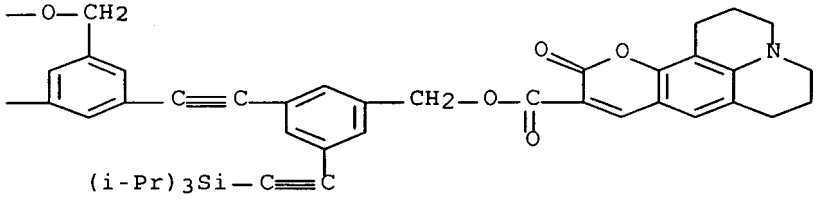


RN 945867-15-2 HCAPLUS
CN 1H,5H,11H-[1]Benzopyrano[6,7,8-ij]quinolizine-10-carboxylic acid, 2,3,6,7-tetrahydro-11-oxo-, [3-[2-[3-[5'-[3-[2-[3-[[(4,6-dimethyl-2-oxo-2H-1-benzopyran-7-yl)ethylamino]methyl]-5-[2-[tris(1-methylethyl)silyl]ethynyl]phenyl]ethynyl]-5-[(hexyloxy)methyl]phenyl][2,2'-bipyridin]-5-yl]-5-[(hexyloxy)methyl]phenyl]ethynyl]-5-[2-[tris(1-methylethyl)silyl]ethynyl]phenyl]methyl ester (CA INDEX NAME)

PAGE 1-A

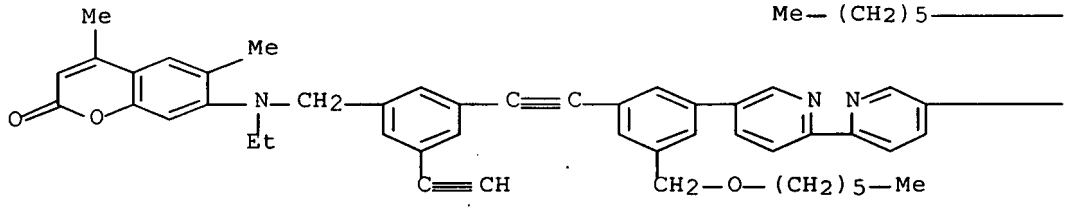


PAGE 1-B

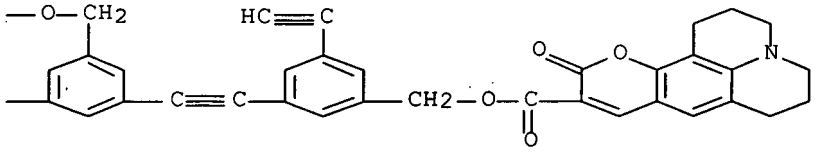


RN 945867-19-6 HCAPLUS
CN 1H,5H,11H-[1]Benzopyrano[6,7,8-ij]quinolizine-10-carboxylic acid, 2,3,6,7-tetrahydro-11-oxo-, [3-[2-[3-[5'-[3-[2-[3-[[(4,6-dimethyl-2-oxo-2H-1-benzopyran-7-yl)ethylamino]methyl]-5-ethynylphenyl]ethynyl]-5-[(hexyloxy)methyl]phenyl][2,2'-bipyridin]-5-yl]-5-[(hexyloxy)methyl]phenyl]ethynyl]-5-ethynylphenyl]methyl ester (CA INDEX NAME)

PAGE 1-A

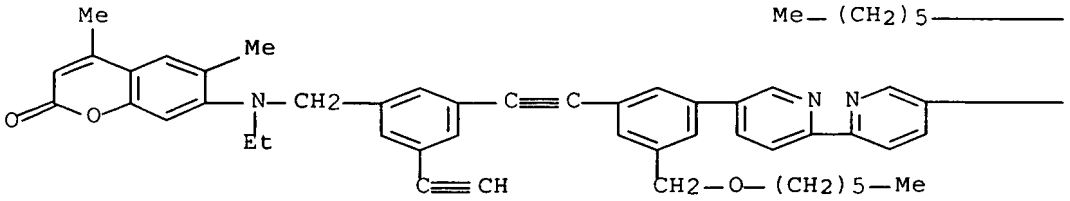


PAGE 1-B

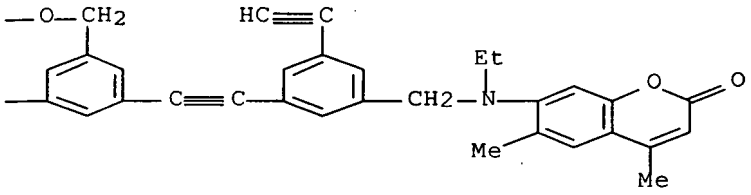


RN 945867-20-9 HCAPLUS
CN 2H-1-Benzopyran-2-one, 7,7'-[[2,2'-bipyridine]-5,5'-diylbis[[5-[(hexyloxy)methyl]-3,1-phenylene]-2,1-ethynediyl(5-ethynyl-3,1-phenylene)methylene(ethylimino)]]bis[4,6-dimethyl- (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))

ST macrocycle bipyridine phenylene alkyne coumarin dye **conjugate** prepn; macrocyclization Sonogashira coupling iodo alkynyl arene prepn macrocycle **conjugate**; coumarin dye macrocyclic bipyridine deriv prepn Sonogashira coupling

IT Coupling reaction
(Sonogashira; preparation of 1,3-phenylenediethynyl-bridged 2,2'-bipyridine macrocycles **conjugated** with coumarin dyes by Suzuki and Sonogashira coupling and macrocyclization)

IT Cycloaddition reaction
(cross-coupling; preparation of 1,3-phenylenediethynyl-bridged 2,2'-bipyridine macrocycles **conjugated** with coumarin dyes by Suzuki and Sonogashira coupling and macrocyclization)

IT Cross-coupling reaction
(cycloaddn.; preparation of 1,3-phenylenediethynyl-bridged 2,2'-bipyridine macrocycles **conjugated** with coumarin dyes by Suzuki and Sonogashira coupling and macrocyclization)

IT Heterocyclic compounds
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(nitrogen, aromatic, 2,2'-bipyridines; preparation of 1,3-phenylenediethynyl-bridged 2,2'-bipyridine macrocycles **conjugated** with coumarin dyes by Suzuki and Sonogashira coupling and macrocyclization)

IT **Conjugation** (molecular association)
Dyes
Macrocyclization
Size-exclusion chromatography
Suzuki coupling reaction
(preparation of 1,3-phenylenediethynyl-bridged 2,2'-bipyridine macrocycles **conjugated** with coumarin dyes by Suzuki and Sonogashira coupling and macrocyclization)

IT Alkynes
Coumarins
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of 1,3-phenylenediethynyl-bridged 2,2'-bipyridine macrocycles **conjugated** with coumarin dyes by Suzuki and Sonogashira coupling and macrocyclization)

IT Macrocyclic compounds
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of 1,3-phenylenediethynyl-bridged 2,2'-bipyridine macrocycles **conjugated** with coumarin dyes by Suzuki and Sonogashira coupling and macrocyclization)

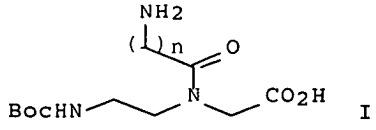
IT 1066-54-2 **26078-25-1** 55804-65-4 89343-06-6
145691-59-4 225797-86-4 296761-60-9 569672-31-7
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(preparation of 1,3-phenylenediethynyl-bridged 2,2'-bipyridine macrocycles **conjugated** with coumarin dyes by Suzuki and Sonogashira coupling and macrocyclization)

IT 56908-88-4P 851605-34-0P 851605-36-2P **945867-03-8P**
945867-04-9P **945867-05-0P 945867-06-1P**
945867-07-2P 945867-08-3P 945867-09-4P 945867-10-7P
945867-11-8P 945867-12-9P 945867-13-0P
945867-15-2P 945867-16-3P 945867-17-4P
945867-19-6P 945867-20-9P 945867-21-0P
945867-22-1P 945867-23-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation of 1,3-phenylenediethynyl-bridged 2,2'-bipyridine macrocycles **conjugated** with coumarin dyes by Suzuki and Sonogashira coupling and macrocyclization)

IT 851605-38-4P 945867-00-5P 945867-01-6P 945867-02-7P
945867-14-1P 945867-18-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of 1,3-phenylenediethynyl-bridged 2,2'-bipyridine macrocycles **conjugated** with coumarin dyes by Suzuki and Sonogashira coupling and macrocyclization)

REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 2 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:556243 HCAPLUS Full-text
DOCUMENT NUMBER: 147:212262
TITLE: Efficient functional molecule incorporation method to functionalized peptide nucleic acid (PNA): use in synthesis of labeled PNA oligomers
AUTHOR(S): Ikeda, Hisafumi; Kitagawa, Fumihiko; Nakamura, Yushin
CORPORATE SOURCE: Graduate School of Pharmaceutical Sciences, Osaka University, Suita, Osaka, 565-0871, Japan
SOURCE: Tetrahedron (2007), 63(25), 5677-5689
CODEN: TETRAB; ISSN: 0040-4020
PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



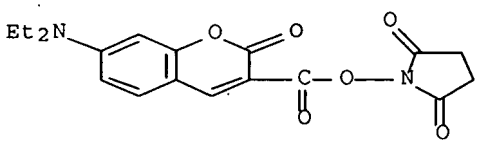
I

AB A novel efficient synthetic method for a functionalized PNA (peptide nucleic acid) is described, in which a functional mol. is incorporated in place of a nucleobase. Novel amino acid-PNA **conjugates** I (n = 1-5) were designed as PNA **precursor monomer** units into which functional mols. could be incorporated efficiently. For example, I reacted quant. with N-hydroxysuccinimidyl active ester and isothiocyanate derivs. of com. available fluorescent labels to give labeled PNA **monomer** units. Various types of functionalized PNA **monomer** units could be efficiently incorporated into multiple predetd. positions in a PNA oligomer by solid-phase peptide synthesis in the same way as for the four A(Cbz), G(Cbz), C(Cbz), and T PNA **monomer** units.

IT **139346-57-9**
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(preparation of PNAs and labeled PNA oligomers)

RN 139346-57-9 HCAPLUS

CN 2H-1-Benzopyran-3-carboxylic acid, 7-(diethylamino)-2-oxo-, 2,5-dioxo-1-pyrrolidinyl ester (CA INDEX NAME)



CC 34-3 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 33

IT 1138-80-3 1947-00-8 2304-94-1 5105-78-2 6066-82-6, N-Hydroxysuccinimide 23135-50-4 27072-45-3 27128-58-1, Dabcyl chloride 72648-80-7 114932-60-4 115584-73-1 117548-22-8 120718-52-7, Tamra **139346-57-9** 169287-77-8 212268-90-1
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(preparation of PNAs and labeled PNA oligomers)

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 3 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:1027995 HCAPLUS Full-text
DOCUMENT NUMBER: 143:301986
TITLE: Stimuli-responsive hydrogel microdomes integrated with genetically engineered proteins for high-throughput screening of pharmaceuticals
INVENTOR(S): Daunert, Sylvia; Deo, Sapna Kamlakar; Ehrick, Jason Douglas; Browning, Tyler William; Bachas, Leonidas G.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 27 pp., Cont.-in-part of U.S. Ser. No. 905,041.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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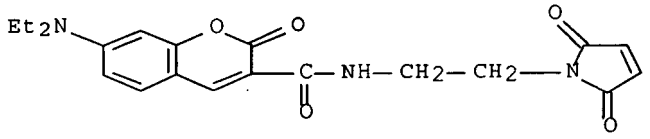
US 2005208469	A1	20050922	US 2004-996068	200411 24
US 2002068295	A1	20020606	US 2001-905041	200107 13
PRIORITY APPLN. INFO.:			US 2000-218036P	P 200007 13
			US 2001-905041	A2 200107 13

AB A hydrogel microdome that can swell in response to a stimuli or target mol. is formed by polymerizing a mixture comprising a **monomer** capable of forming a hydrogel with a biopolymer. An array of hydrogel microdomes can be formed on a substrate by microspotting the mixture and polymerizing The array can be used for high-throughput screening of analytes as well as for use as an actuator and biosensor using the swelling property of the hydrogel.

IT **156571-46-9**, MDCC
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(stimuli-responsive hydrogel microdomes integrated with genetically engineered proteins for high-throughput screening of pharmaceuticals)

RN 156571-46-9 HCAPLUS

CN 2H-1-Benzopyran-3-carboxamide, 7-(diethylamino)-N-[2-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)ethyl]-2-oxo- (CA INDEX NAME)



IC ICM C12Q001-00
ICS C12M001-34

INCL 435004000; 435287100

CC 9-1 (Biochemical Methods)
Section cross-reference(s): 1

IT Calmodulins
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**conjugate** with BMPS; stimuli-responsive hydrogel microdomes integrated with genetically engineered proteins for high-throughput screening of pharmaceuticals)

IT Calmodulins
RL: BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent)
(**monomer**; stimuli-responsive hydrogel microdomes integrated with genetically engineered proteins for high-throughput screening of pharmaceuticals)

IT 156571-46-9DP, MDCC, calmodulin-**conjugated**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(stimuli-responsive hydrogel microdomes integrated with

genetically engineered proteins for high-throughput screening of pharmaceuticals)

IT 2095-14-9 38862-24-7 **156571-46-9**, MDCC
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(stimuli-responsive hydrogel microdomes integrated with genetically engineered proteins for high-throughput screening of pharmaceuticals)

IT 79-06-1DP, Acrylamide, polymer vinyl-containing 3-(trifluoromethyl-phenothiazin-10-yl) propylamide and N,N-methylenebis(acrylamide) 110-26-9DP, polymer with vinyl-containing 3-(trifluoromethyl-phenothiazin-10-yl) propylamide and acrylamide 2095-14-9DP, **conjugate** with calmodulin 864538-88-5P 864538-89-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(stimuli-responsive hydrogel microdomes integrated with genetically engineered proteins for high-throughput screening of pharmaceuticals)

L24 ANSWER 4 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:641704 HCAPLUS Full-text
DOCUMENT NUMBER: 143:129481
TITLE: Biosensor having metal surfaces coated with hydrophobic polymer so as not to be significantly affected by baseline fluctuation or nonspecific adsorption
INVENTOR(S): Kubo, Toshiaki; Ezoe, Toshihide
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: U.S. Pat. Appl. Publ., 20 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005158850	A1	20050721	US 2004-20254	200412 27
JP 2005189061	A	20050714	JP 2003-429860	200312 25
JP 2005283142	A	20051013	JP 2004-93048	200403 26
JP 2005283143	A	20051013	JP 2004-93049	200403 26
JP 2005315588	A	20051110	JP 2004-130593	200404 27

PRIORITY APPLN. INFO.:	JP 2003-429860	A	200312 25
	JP 2004-93048	A	200403 26

JP 2004-93049 A 200403 26

JP 2004-130593 A 200404 27

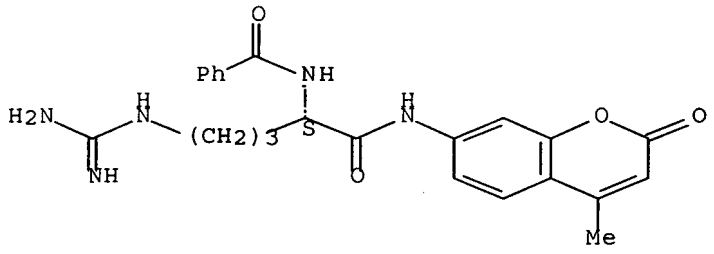
AB It is an object of the present invention to provide a biosensor, which is not significantly affected by baseline fluctuation and suppresses nonspecific adsorption. The present invention provides a biosensor, which comprises a metal surface or metal film coated with a hydrophobic polymer, and has two or more types of different surfaces in a region coated with a hydrophobic polymer. A dielec. block was coated with a gold film and then with polymethyl methacrylate (PMMA). The PMMA layer was treated with NaOH and then activated with 1-ethyl-2,3-dimethylaminopropylcarbodiimide mixed with pentafluorophenol. Biotin-LC-amine was then applied by ink-jet printing to a half portion of the treated surface. Ethanolamine was used as blocking agent on the entire surface. Biotinylated IL-8 antibody was immobilized on the printed surface and the chip was used to measure IL-8. The immunosensor gave good detectability of antigen binding and good reproducibility.

IT **65452-02-0**
RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); **RACT (Reactant or reagent)**; USES (Uses)
(as substrate for trypsin activity determination; biosensor having metal surfaces coated with hydrophobic polymer so as not to be significantly affected by baseline fluctuation or nonspecific adsorption)

RN 65452-02-0 HCAPLUS

CN Benzamide, N-[(1S)-4-[(aminoiminomethyl)amino]-1-[[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)amino]carbonyl]butyl]- (CA INDEX NAME)

Absolute stereochemistry.



IC ICM C12M001-34

INCL 435287200

CC 9-1 (Biochemical Methods)
Section cross-reference(s): 15

IT **65452-02-0**
RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); **RACT (Reactant or reagent)**; USES (Uses)
(as substrate for trypsin activity determination; biosensor having metal surfaces coated with hydrophobic polymer so as not to be significantly affected by baseline fluctuation or nonspecific adsorption)

IT 31900-57-9, PDMS
RL: NUU (Other use, unclassified); USES (Uses)
(assumed **monomer**, film, as diaphragm in preparation of

two-part split surface; biosensor having metal surfaces coated with hydrophobic polymer so as not to be significantly affected by baseline fluctuation or nonspecific adsorption)

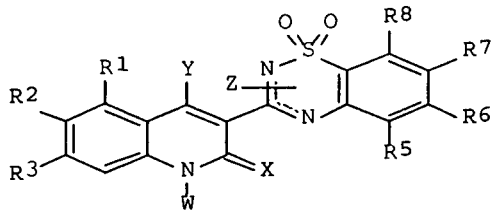
IT 58-85-5D, Biotin, **conjugates** with antibody to IL-8, immobilized on biosensor chip
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); DEV (Device component use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(biosensor having metal surfaces coated with hydrophobic polymer so as not to be significantly affected by baseline fluctuation or nonspecific adsorption)

L24 ANSWER 5 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:513504 HCAPLUS Full-text
DOCUMENT NUMBER: 141:71570
TITLE: Preparation of 3-(benzothiadiazin-3-yl)quinolines as HCV anti-infectives
INVENTOR(S): Chai, Deping; Duffy, Kevin J.; Fitch, Duke M.; Shaw, Antony N.; Tedesco, Rosanna; Wiggall, Kenneth J.; Zimmerman, Michael N.
PATENT ASSIGNEE(S): Smithkline Beecham Corporation, USA
SOURCE: PCT Int. Appl., 88 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004052313	A2	20040624	WO 2003-US39983	200312 11
WO 2004052313	A3	20040902		
W: AE, AG, AL, AU, BA, BB, BR, BZ, CA, CN, CO, CR, CU, DM, DZ, EC, EG, GD, GE, HR, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MA, MG, MK, MN, MX, NO, NZ, OM, PH, PL, RO, SC, SG, TN, TT, UA, US, UZ, VN, YU, ZA				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003300957	A1	20040630	AU 2003-300957	200312 11

PRIORITY APPLN. INFO.:		
US 2002-432462P	P	200212 11
WO 2003-US39983	W	200312 11

OTHER SOURCE(S): MARPAT 141:71570
GI



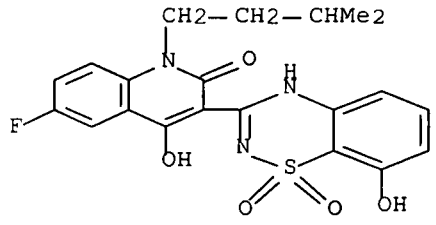
I

AB 3-(Benzothiadiazin-3-yl)quinolines, e.g., I [R1 = H, halogen, C1-4-alkyl, OR11, NR10R11, aryl, CO2H, CONHR11, CN, NO2, NH2, etc.; R2 = H, (un)substituted C1-8-alkyl, C2-8-alkenyl, C2-8-alkynyl, C3-6-cycloalkyl, heterocycloalkyl, aryl, heteroaryl, NO2, CN, halogen, CO2R9, COR9, OR9, SR9, S(O)R12, SO2R12, etc.; R3 = H, halogen, CN, C1-6-alkyl, OH, CO2H; R4, R6 = H, halogen, CN, C1-6-alkyl, OH, O-(C1-4-alkyl), C1-4-haloalkyl, NO2, NH2; R5 = H, halogen, CN, C1-6-alkyl, OH, O-(C1-4-alkyl); R7 = H, C1-8-alkyl, C2-8-alkenyl, C2-8-alkynyl, C3-6-cycloalkyl, heterocycloalkyl, aryl, heteroaryl, NO2, CN, halogen, CO2R9, COR9, OR9, SR9, S(O)R12, SO2R12, etc.; R8 = H, halogen, OH, C1-4-alkyl, CO2R9, COR9, etc.; R1R2, R5R6, R6R7, R7R8 = alkylenedioxy; W = H, CO2R11, (un)substituted C1-10-alkyl, C2-10-alkenyl, C2-10-alkynyl, C3-6-cycloalkyl, (C1-6-alkyl)-(C3-6-cycloalkyl), (C2-6-alkenyl)-(C3-6-cycloalkyl), (C2-6-alkynyl)-(C3-6-cycloalkyl), etc.; X = O, S; Y = OH, SH; Z = H, C1-4-alkyl; R9 = H, C1-8-alkyl, C2-8-alkenyl, C2-8-alkynyl, C3-6-cycloalkyl, heterocycloalkyl, aryl, heteroaryl, etc.; R10 = H, C1-6-alkyl; R11 = H, C1-6-alkyl, C3-6-cycloalkyl, heterocycloalkyl, aryl,heteroaryl; R12 = C1-8-alkyl, C2-8-alkenyl, C2-8-alkynyl, C3-6-cycloalkyl, heterocycloalkyl, aryl, heteroaryl], their tautomers, pharmaceutically acceptable salts (especially sodium and potassium), and solvates, useful as HCV anti-infectives are disclosed. Also disclosed are methods of making and using the same.

IT **709041-86-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(preparation and O-alkylation of, with chloroacetamide; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

RN 709041-86-1 HCAPLUS

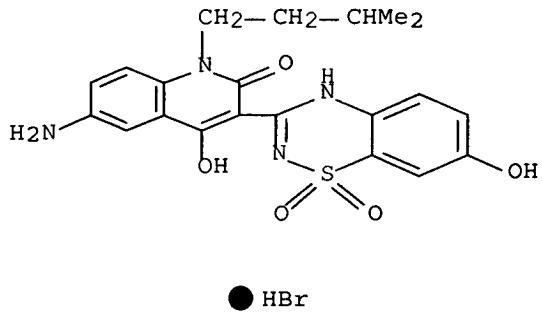
CN 2(1H)-Quinolinone, 6-fluoro-4-hydroxy-3-(8-hydroxy-1,1-dioxido-2H-1,2,4-benzothiadiazin-3-yl)-1-(3-methylbutyl)- (9CI) (CA INDEX NAME)



IT **712274-20-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(preparation and alkylation by, of bromoacetonitrile; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

RN 712274-20-9 HCAPLUS

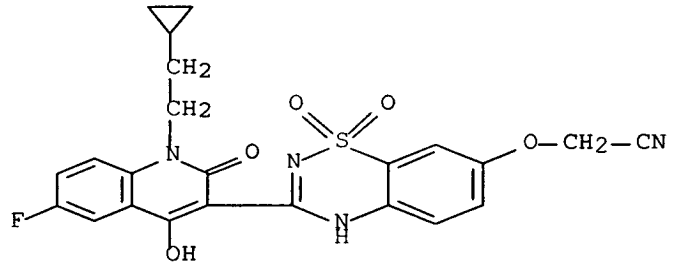
CN 2(1H)-Quinolinone, 6-amino-4-hydroxy-3-(7-hydroxy-1,1-dioxido-2H-1,2,4-benzothiadiazin-3-yl)-1-(3-methylbutyl)-, monohydrobromide (9CI) (CA INDEX NAME)



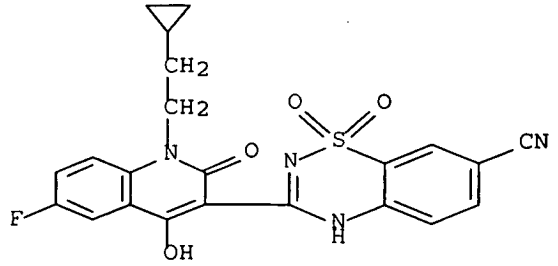
● HBr

IT **477931-77-4P 709042-06-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and ammoniation of; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

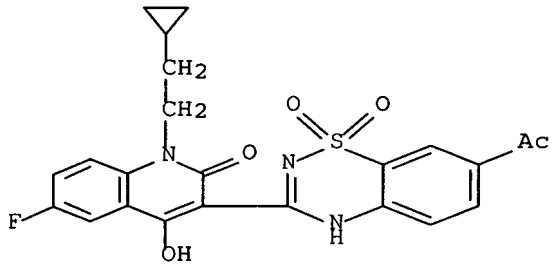
RN 477931-77-4 HCAPLUS
CN Acetonitrile, [[3-[1-(2-cyclopropylethyl)-6-fluoro-1,2-dihydro-4-hydroxy-2-oxo-3-quinolinyl]-1,1-dioxido-2H-1,2,4-benzothiadiazin-7-yl]oxy]- (9CI) (CA INDEX NAME)



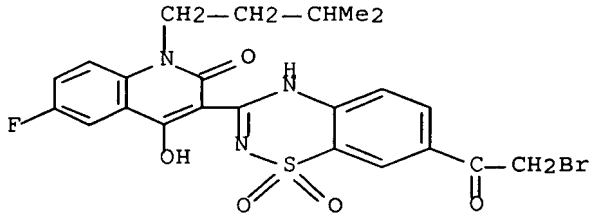
RN 709042-06-8 HCAPLUS
CN 2H-1,2,4-Benzothiadiazine-7-carbonitrile, 3-[1-(2-cyclopropylethyl)-6-fluoro-1,2-dihydro-4-hydroxy-2-oxo-3-quinolinyl]-, 1,1-dioxide (9CI) (CA INDEX NAME)



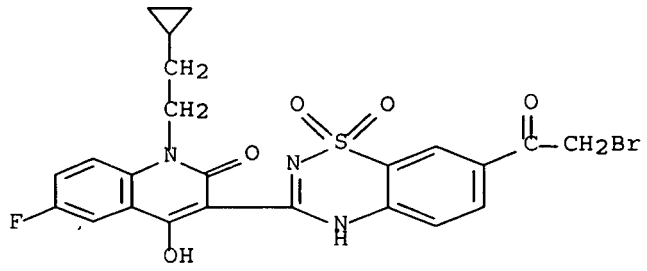
IT **709042-36-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(preparation and bromination of; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)
RN 709042-36-4 HCAPLUS
CN 2(1H)-Quinolinone, 3-(7-acetyl-1,1-dioxido-2H-1,2,4-benzothiadiazin-3-yl)-1-(2-cyclopropylethyl)-6-fluoro-4-hydroxy- (9CI) (CA INDEX NAME)



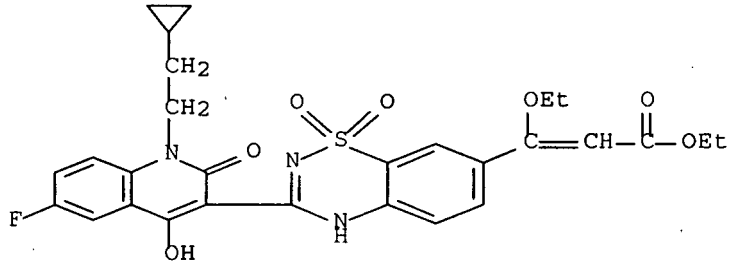
IT **709042-19-3P 712274-21-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(preparation and cyclocondensation of, with acetylthiourea; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)
RN 709042-19-3 HCAPLUS
CN 2(1H)-Quinolinone, 3-[7-(bromoacetyl)-1,1-dioxido-2H-1,2,4-benzothiadiazin-3-yl]-6-fluoro-4-hydroxy-1-(3-methylbutyl)- (9CI) (CA INDEX NAME)



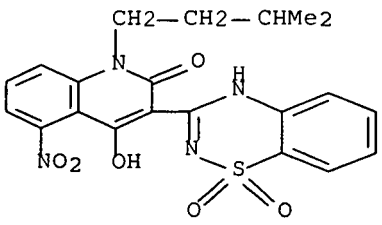
RN 712274-21-0 HCAPLUS
CN 2(1H)-Quinolinone, 3-[7-(bromoacetyl)-1,1-dioxido-2H-1,2,4-benzothiadiazin-3-yl]-1-(2-cyclopropylethyl)-6-fluoro-4-hydroxy- (9CI) (CA INDEX NAME)



IT **712274-24-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(preparation and cyclocondensation of, with hydroxylamine; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)
RN 712274-24-3 HCAPLUS
CN 2-Propenoic acid, 3-[3-[1-(2-cyclopropylethyl)-6-fluoro-1,2-dihydro-4-hydroxy-2-oxo-3-quinolinyl]-1,1-dioxido-2H-1,2,4-benzothiadiazin-7-yl]-3-ethoxy-, ethyl ester (9CI) (CA INDEX NAME)



IT **709042-09-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(preparation and hydrogenolysis of; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)
RN 709042-09-1 HCAPLUS
CN 2(1H)-Quinolinone, 3-(1,1-dioxido-2H-1,2,4-benzothiadiazin-3-yl)-4-hydroxy-1-(3-methylbutyl)-5-nitro- (9CI) (CA INDEX NAME)

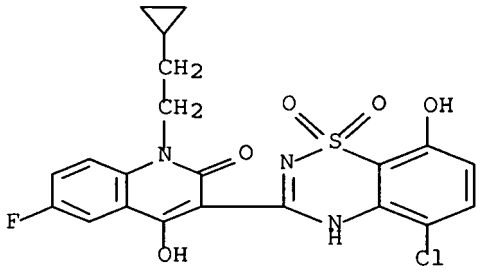


IT **709041-95-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)

(preparation and hydrogenolysis or reaction of, with chloroacetamide; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

RN 709041-95-2 HCAPLUS

CN 2(1H)-Quinolinone, 3-(5-chloro-8-hydroxy-1,1-dioxido-2H-1,2,4-benzothiadiazin-3-yl)-1-(2-cyclopropylethyl)-6-fluoro-4-hydroxy- (9CI) (CA INDEX NAME)



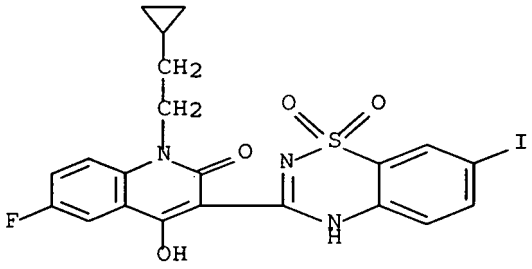
IT **477933-29-2P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**

(preparation and methoxycarbonylation, cyanation, acetylation or reaction of, with ethoxyacrylate; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

RN 477933-29-2 HCAPLUS

CN 2(1H)-Quinolinone, 1-(2-cyclopropylethyl)-6-fluoro-4-hydroxy-3-(7-iodo-1,1-dioxido-2H-1,2,4-benzothiadiazin-3-yl)- (9CI) (CA INDEX NAME)



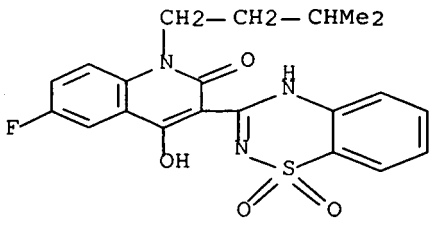
IT **477930-55-5P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**

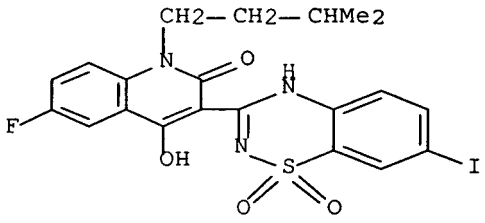
(preparation and nitration of; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

RN 477930-55-5 HCAPLUS

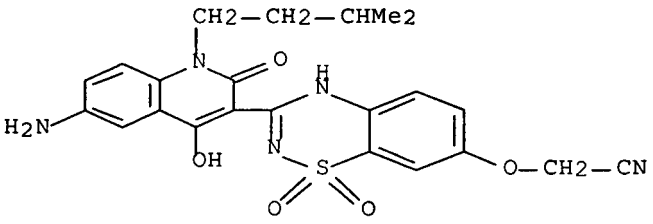
CN 2(1H)-Quinolinone, 3-(1,1-dioxido-2H-1,2,4-benzothiadiazin-3-yl)-6-fluoro-4-hydroxy-1-(3-methylbutyl)- (9CI) (CA INDEX NAME)



IT **709042-38-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(preparation and palladium-catalyzed acetylation of; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)
RN 709042-38-6 HCAPLUS
CN 2(1H)-Quinolinone, 6-fluoro-4-hydroxy-3-(7-iodo-1,1-dioxido-2H-1,2,4-benzothiadiazin-3-yl)-1-(3-methylbutyl)- (9CI) (CA INDEX NAME)

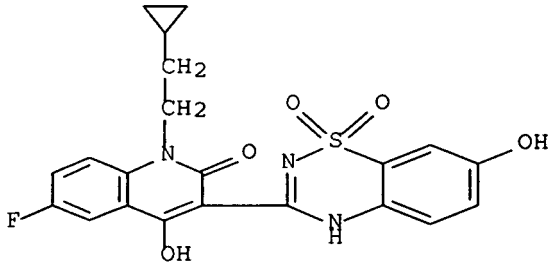


IT **477932-03-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(preparation and reaction of, with DMF di-Me acetal; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)
RN 477932-03-9 HCAPLUS
CN Acetonitrile, [[3-[6-amino-1,2-dihydro-4-hydroxy-1-(3-methylbutyl)-2-oxo-3-quinolinyl]-1,1-dioxido-2H-1,2,4-benzothiadiazin-7-yl]oxy]- (9CI) (CA INDEX NAME)



IT **477931-76-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(preparation and reaction of, with bromoacetamide or chloroacetonitrile; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)
RN 477931-76-3 HCAPLUS

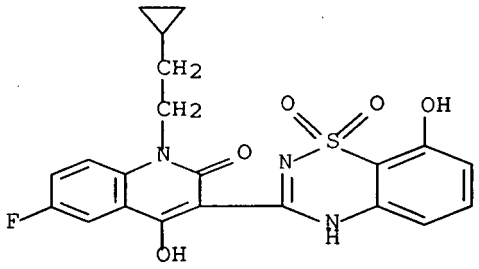
CN 2(1H)-Quinolinone, 1-(2-cyclopropylethyl)-6-fluoro-4-hydroxy-3-(7-hydroxy-1,1-dioxido-2H-1,2,4-benzothiadiazin-3-yl)- (9CI) (CA INDEX NAME)



IT **712274-25-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and reaction of, with chloroacetamide; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

RN 712274-25-4 HCAPLUS

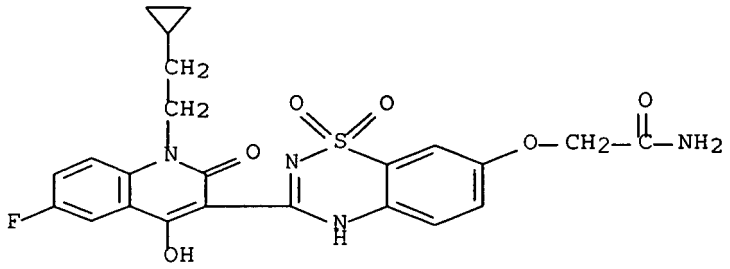
CN 2(1H)-Quinolinone, 1-(2-cyclopropylethyl)-6-fluoro-4-hydroxy-3-(8-hydroxy-1,1-dioxido-2H-1,2,4-benzothiadiazin-3-yl)- (9CI) (CA INDEX NAME)



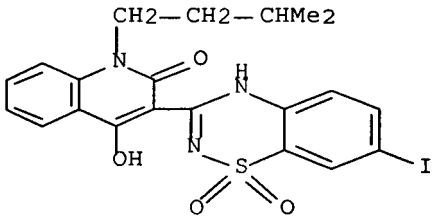
IT **477931-78-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); **RACT (Reactant or reagent)**; USES (Uses)
(preparation and reaction of, with dimethylchloroacetamide; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

RN 477931-78-5 HCAPLUS

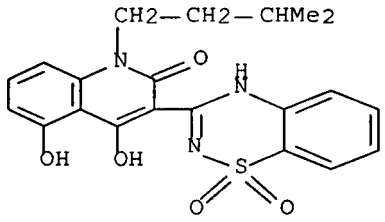
CN Acetamide, 2-[[3-[1-(2-cyclopropylethyl)-6-fluoro-1,2-dihydro-4-hydroxy-2-oxo-3-quinolinyl]-1,1-dioxido-2H-1,2,4-benzothiadiazin-7-yl]oxy]- (9CI) (CA INDEX NAME)



IT **477932-19-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(preparation and reaction of, with ethoxyacrylate; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)
RN 477932-19-7 HCAPLUS
CN 2(1H)-Quinolinone, 4-hydroxy-3-(7-iodo-1,1-dioxido-2H-1,2,4-benzothiadiazin-3-yl)-1-(3-methylbutyl)- (9CI) (CA INDEX NAME)

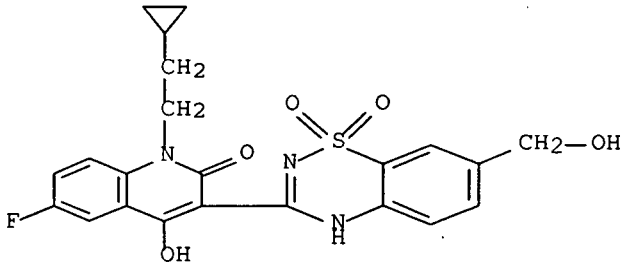


IT **709042-05-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(preparation and reaction of, with haloacetamide or haloacetate; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)
RN 709042-05-7 HCAPLUS
CN 2(1H)-Quinolinone, 3-(1,1-dioxido-2H-1,2,4-benzothiadiazin-3-yl)-4,5-dihydroxy-1-(3-methylbutyl)- (9CI) (CA INDEX NAME)



IT **709041-99-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(preparation and reaction of, with trichloroacetyl isocyanate; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)
RN 709041-99-6 HCAPLUS

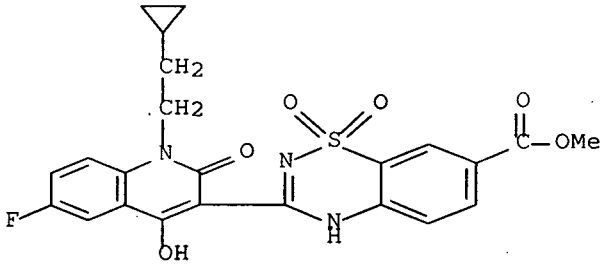
CN 2(1H)-Quinolinone, 1-(2-cyclopropylethyl)-6-fluoro-4-hydroxy-3-[7-(hydroxymethyl)-1,1-dioxido-2H-1,2,4-benzothiadiazin-3-yl]- (9CI) (CA INDEX NAME)



IT **709042-37-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and reduction of; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

RN 709042-37-5 HCAPLUS

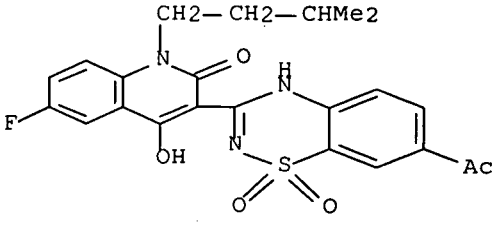
CN 2H-1,2,4-Benzothiadiazine-7-carboxylic acid, 3-[1-(2-cyclopropylethyl)-6-fluoro-1,2-dihydro-4-hydroxy-2-oxo-3-quinolinyl]-, methyl ester, 1,1-dioxide (9CI) (CA INDEX NAME)



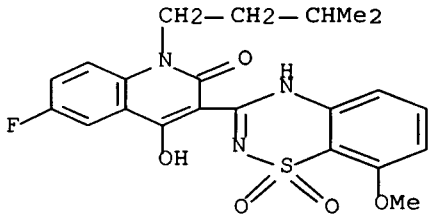
IT **709042-39-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and regioselective bromination of; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

RN 709042-39-7 HCAPLUS

CN 2(1H)-Quinolinone, 3-(7-acetyl-1,1-dioxido-2H-1,2,4-benzothiadiazin-3-yl)-6-fluoro-4-hydroxy-1-(3-methylbutyl)- (9CI) (CA INDEX NAME)



IT **709042-14-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); **RACT (Reactant or reagent)**; USES (Uses)
(preparation, hydrolysis and anti-infective activity of; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)
RN 709042-14-8 HCAPLUS
CN 2(1H)-Quinolinone, 6-fluoro-4-hydroxy-3-(8-methoxy-1,1-dioxido-2H-1,2,4-benzothiadiazin-3-yl)-1-(3-methylbutyl)- (9CI) (CA INDEX NAME)



IC ICM A61K
CC 28-20 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 1, 63
IT Peptides, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**conjugates**, with nucleic acids, co-drug; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)
IT 143456-48-8P, 4-Toluenesulfonic acid (S)-2-oxopyrrolidin-3-yl ester
RL: SPN (Synthetic preparation); PREP (Preparation)
(key **precursor**; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)
IT **709041-86-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and O-alkylation of, with chloroacetamide; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)
IT **712274-20-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and alkylation by, of bromoacetonitrile; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)
IT **477931-77-4P 709042-06-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and ammoniation of; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)
IT **709042-36-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and bromination of; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)
IT **709042-19-3P 712274-21-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and cyclocondensation of, with acetylthiourea; preparation of

HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

IT **712274-24-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and cyclocondensation of, with hydroxylamine; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

IT 577-61-7P, 2-Nitro-4-(trifluoromethyl)benzenesulfonamide
477932-88-0P, 1-(3-Methylbutyl)-6-nitro-1H-benzo[d][1,3]oxazine-2,4-dione **709042-09-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and hydrogenolysis of; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

IT **709041-95-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and hydrogenolysis or reaction of, with chloroacetamide; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

IT **477933-29-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and methoxycarbonylation, cyanation, acetylation or reaction of, with ethoxyacrylate; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

IT **477930-55-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and nitration of; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

IT **709042-38-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and palladium-catalyzed acetylation of; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

IT **477932-03-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and reaction of, with DMF di-Me acetal; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

IT **477931-76-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and reaction of, with bromoacetamide or chloroacetonitrile; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

IT **712274-25-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and reaction of, with chloroacetamide; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

IT **477931-78-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); **RACT (Reactant or reagent)**; USES (Uses)
(preparation and reaction of, with dimethylchloroacetamide; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

IT **477932-19-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and reaction of, with ethoxyacrylate; preparation of HCV

anti-infective 3-(benzothiadiazin-3-yl)quinolines)

IT **709042-05-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and reaction of, with haloacetamide or haloacetate; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

IT **709041-99-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and reaction of, with trichloroacetyl isocyanate; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

IT **709042-37-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and reduction of; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

IT **709042-39-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and regioselective bromination of; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

IT **709042-14-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); **RACT (Reactant or reagent)**; USES (Uses)
(preparation, hydrolysis and anti-infective activity of; preparation of HCV anti-infective 3-(benzothiadiazin-3-yl)quinolines)

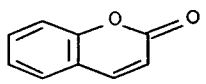
L24 ANSWER 6 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:891899 HCAPLUS Full-text
DOCUMENT NUMBER: 139:361242
TITLE: Electrochemical immobilization of biomolecules using coumarin derivatives as **monomers** for conducting polymers and the preparation of biosensors
INVENTOR(S): Gajovic-eichelmann, Nenad
PATENT ASSIGNEE(S): Fraunhofer-Gesellschaft zur Foerderung der Angewandten Forschung E.V., Germany
SOURCE: Ger. Offen., 8 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10217597	A1	20031113	DE 2002-10217597	20020419
PRIORITY APPLN. INFO.:			DE 2002-10217597	20020419

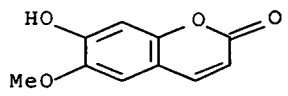
OTHER SOURCE(S): MARPAT 139:361242
AB The invention concerns the electrochem. immobilization of biomols. onto a conducting surface by the deposition of a conducting polymer layer from an aqueous solution and the entrapment of the biomol. into the polymer layer; **monomers** for the conducting layer are coumarin derivs. Biomols. are nucleic

acids, antibodies, antigens, peptides, proteins, enzymes, hormones, organic and inorg. nanoparticles and cells. Carriers for the conducting polymers are electrodes; conducting salts, redox mediators, and other additives are added. Biosensors, immunosensors, microsystems are produced for use in conjunction with measuring devices, e.g. fluorometers, fluorescence microscopes, photometers, image scanners, etc. Thus a gold interdigital miniature electrode was covered with scopoletin polymer and streptavidin using a 0.05 M potassium chloride solution pH 7 that contained 1 m-Mol/L scopoletin and 1 mg/mL streptavidin at constant 0.5 V with Ag/AgCl reference electrode and Pt counter electrode. 5'-Biotinylated 13-mer oligomer in phosphate buffer was bound to the modified electrode by incubating the solution with the electrode for 30 min. at room temperature

IT **91-64-5**, Coumarin
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(derivative; electrochem. immobilization of biomols. using coumarin derivs. as **monomers** for conducting polymers and the preparation of biosensors)
RN 91-64-5 HCAPLUS
CN 2H-1-Benzopyran-2-one (CA INDEX NAME)



IT **92-61-5**, Scopoletin
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(electrochem. immobilization of biomols. using coumarin derivs. as **monomers** for conducting polymers and the preparation of biosensors)
RN 92-61-5 HCAPLUS
CN 2H-1-Benzopyran-2-one, 7-hydroxy-6-methoxy- (CA INDEX NAME)



IC ICM G01N027-327
ICS G01N033-549; G01N033-68; G01N033-50; C12Q001-00; C12Q001-68
CC 9-16 (Biochemical Methods)
Section cross-reference(s): 3, 38
IT Cell
Conducting polymers
Electrodeposition
Electrodes
Enzyme electrodes
Immobilization, molecular or cellular
Microelectrodes
Nanoparticles
(electrochem. immobilization of biomols. using coumarin derivs. as **monomers** for conducting polymers and the preparation of biosensors)
IT Salts, uses
RL: NUU (Other use, unclassified); USES (Uses)

(electrochem. immobilization of biomols. using coumarin derivs. as **monomers** for conducting polymers and the preparation of biosensors)

IT Antibodies and Immunoglobulins
Antigens
Enzymes, processes
Hormones, animal, processes
Hormones, plant
Nucleic acids
Peptides, processes
Proteins
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(electrochem. immobilization of biomols. using coumarin derivs. as **monomers** for conducting polymers and the preparation of biosensors)

IT Biochemical compounds
RL: PRP (Properties)
(electrochem. immobilization of biomols. using coumarin derivs. as **monomers** for conducting polymers and the preparation of biosensors)

IT Polymerization
(electrochem.; electrochem. immobilization of biomols. using coumarin derivs. as **monomers** for conducting polymers and the preparation of biosensors)

IT Biosensors
(immunosensors; electrochem. immobilization of biomols. using coumarin derivs. as **monomers** for conducting polymers and the preparation of biosensors)

IT **91-64-5**, Coumarin
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(derivative; electrochem. immobilization of biomols. using coumarin derivs. as **monomers** for conducting polymers and the preparation of biosensors)

IT 9013-20-1, Streptavidin
RL: CPS (Chemical process); DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(electrochem. immobilization of biomols. using coumarin derivs. as **monomers** for conducting polymers and the preparation of biosensors)

IT 7440-57-5, Gold, uses
RL: DEV (Device component use); USES (Uses)
(electrochem. immobilization of biomols. using coumarin derivs. as **monomers** for conducting polymers and the preparation of biosensors)

IT 92-61-5DP, Scopoletin, polymeric derivs.
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(electrochem. immobilization of biomols. using coumarin derivs. as **monomers** for conducting polymers and the preparation of biosensors)

IT 58-85-5D, Biotin, oligomer- or fluorescein-**conjugated**
2321-07-5D, Fluorescein, **conjugate** with biotin
9001-96-1, Pyruvate oxidase
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(electrochem. immobilization of biomols. using coumarin derivs. as **monomers** for conducting polymers and the preparation of biosensors)

IT **92-61-5**, Scopoletin
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(electrochem. immobilization of biomols. using coumarin derivs. as **monomers** for conducting polymers and the preparation of biosensors)

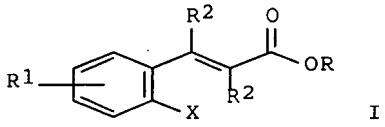
L24 ANSWER 7 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:221792 HCAPLUS Full-text
DOCUMENT NUMBER: 138:260128
TITLE: Photo-labile pro-fragrances and compositions containing them
INVENTOR(S): Dykstra, Robert Richard; Gray, Lon Montgomery
PATENT ASSIGNEE(S): The Procter & Gamble Company, USA
SOURCE: PCT Int. Appl., 36 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003022978	A1	20030320	WO 2002-US28645	20020910
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003125220	A1	20030703	US 2002-217278	20020812
EG 23159	A	20040531	EG 2002-1004	20020909
CA 2456620	A1	20030320	CA 2002-2456620	20020910
AU 2002333520	A1	20030324	AU 2002-333520	20020910
EP 1432784	A1	20040630	EP 2002-798177	20020910
EP 1432784	B1	20071024		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
BR 2002012445	A	20040817	BR 2002-12445	20020910
CN 1553948	A	20041208	CN 2002-817797	20020910

HU 2004001781	A2	20041228	HU 2004-1781	200209 10
JP 2005502768	T	20050127	JP 2003-527043	200209 10
AT 376582	T	20071115	AT 2002-798177	200209 10
IN 2004DN00309	A	20050401	IN 2004-DN309	200402 10
MX 2004PA02288	A	20040629	MX 2004-PA2288	200403 10
US 2005014663	A1	20050120	US 2004-919148	200408 16
US 2005227879	A1	20051013	US 2005-143067	200506 02
US 7071151	B2	20060704		
PRIORITY APPLN. INFO.:			US 2001-318662P	P 200109 11
			US 2002-217278	A1 200208 12
			WO 2002-US28645	W 200209 10
			US 2004-919148	A1 200408 16

OTHER SOURCE(S): MARPAT 138:260128

GI



I

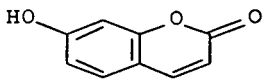
AB The present invention relates to photo-labile pro-fragrances, as well as a fragrance raw material delivery system with an aesthetic benefit comprising: (i) from about 0.001% to about 100% by weight, of a photo-labile pro-fragrance compound having the formula I, wherein OR is a unit derived from a fragrance raw material alc., HOR; R1 is one or more electron donating groups; each R2 is independently hydrogen, C1-C12 alkyl, and mixts. thereof; X is selected from the group consisting of -OH, -NH2, -NHR3, and mixts. thereof; R3 is hydrogen, C1-C12 linear or branched alkyl, C6-C10 aryl, and mixts. thereof; and (ii)

optionally from about 0.001% to about 50% by weight, of one or more fragrance raw materials. These delivery systems are useful for detergents, shampoos, personal care products, and fabric softeners. Thus, 1,5-dimethyl-1-vinylhex-4-enyl 3-(2,4-dihydroxyphenyl)acrylate was manufactured by reaction of 3-(2,4-dihydroxyphenyl)acrylic acid with linalool.

IT **93-35-6**, 7-Hydroxychromen-2-one
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(profragrance **precursor**; photolabile profragrances exhibiting good aesthetic benefits for detergents, shampoos, personal care products, and fabric softeners)

RN 93-35-6 HCAPLUS

CN 2H-1-Benzopyran-2-one, 7-hydroxy- (CA INDEX NAME)



IC ICM C11D003-50
ICS A61K007-32; C07C229-44

CC 62-5 (Essential Oils and Cosmetics)
Section cross-reference(s): 25, 46

ST photoactivatable profragrance arylbutenoate deriv detergent; fragrance **precursor conjugate** photolabile manuf; fabric softener photoactivatable profragrance arylbutenoate deriv; personal care product photoactivatable profragrance arylbutenoate deriv; shampoo photoactivatable profragrance arylbutenoate deriv; dimethylvinylhexenyl dihydroxyphenylacrylate manuf photoactivatable profragrance

IT 614-86-8P, 3-(2,4-Dihydroxyphenyl)acrylic acid
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(profragrance **precursor**; photolabile profragrances exhibiting good aesthetic benefits for detergents, shampoos, personal care products, and fabric softeners)

IT 60-12-8, Phenethyl alcohol 78-70-6, Linalool **93-35-6**, 7-Hydroxychromen-2-one 106-22-9, Citronellol
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(profragrance **precursor**; photolabile profragrances exhibiting good aesthetic benefits for detergents, shampoos, personal care products, and fabric softeners)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 8 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:790577 HCAPLUS Full-text
DOCUMENT NUMBER: 133:351506
TITLE: Aza-benzazolium-containing cyanine dyes and their use in fluorescent biological stains
INVENTOR(S): Haugland, Richard P.; Yue, Stephen T.
PATENT ASSIGNEE(S): Molecular Probes, Inc., USA
SOURCE: PCT Int. Appl., 87 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2000066664	A1	20001109	WO 2000-US11549		200004 26
W: AU, CA, JP RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE					
US 6664047	B1	20031216	US 2000-557275		200004 24
AU 200046786	A	20001117	AU 2000-46786		200004 26
US 2004137475	A1	20040715	US 2003-683753		200310 13
US 7226740	B2	20070605			
PRIORITY APPLN. INFO.:			US 1999-131782P	P	199904 30
			US 1999-158859P	P	199910 12
			US 2000-557275	A3	200004 24
			WO 2000-US11549	W	200004 26

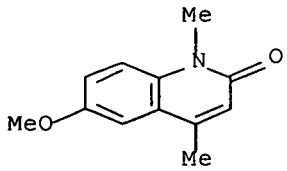
OTHER SOURCE(S): CASREACT 133:351506

AB Unsym. cyanine dyes that incorporate an aza-benzazolium ring moiety are disclosed, including cyanine dyes substituted by a cationic side chain, **monomeric** and dimeric cyanine dyes, chemical reactive cyanine dyes, and **conjugates** of cyanine dyes. The dyes are virtually non-fluorescent when diluted in aqueous solution, but exhibit bright fluorescence when associated with nucleic acid polymers such as DNA or RNA, or when associated with detergent-complexed proteins. A variety of applications are described for detection and quantitation of nucleic acids and detergent-complexed proteins in a variety of samples, including solns., electrophoretic gels, cells, and microorganisms.

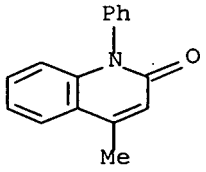
IT **1843-89-6**, 6-Methoxy-1,4-dimethyl-2-quinolone
2540-30-9, 4-Methyl-1-phenyl-2-quinolone **2584-47-6**
, 1,4-Dimethyl-2-quinolone **111724-59-5**,
7-Methoxy-1,4-dimethyl-2-quinolone **305802-26-0**,
6,7-Dimethoxy-1,4-dimethyl-2-quinolone **305802-29-3**,
4-Ethyl-1-methyl-2-quinolone
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(dye starting material; production of azabenzazolium cyanine dyes for fluorescent biol. stains)

RN 1843-89-6 HCAPLUS

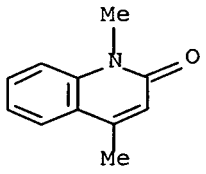
CN 2(1H)-Quinolinone, 6-methoxy-1,4-dimethyl- (CA INDEX NAME)



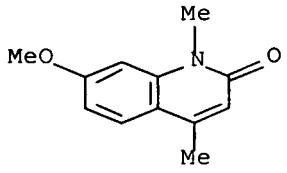
RN 2540-30-9 HCAPLUS
CN 2(1H)-Quinolinone, 4-methyl-1-phenyl- (CA INDEX NAME)



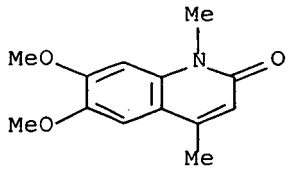
RN 2584-47-6 HCAPLUS
CN 2(1H)-Quinolinone, 1,4-dimethyl- (CA INDEX NAME)



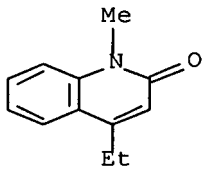
RN 111724-59-5 HCAPLUS
CN 2(1H)-Quinolinone, 7-methoxy-1,4-dimethyl- (CA INDEX NAME)



RN 305802-26-0 HCAPLUS
CN 2(1H)-Quinolinone, 6,7-dimethoxy-1,4-dimethyl- (CA INDEX NAME)



RN 305802-29-3 HCAPLUS
CN 2(1H)-Quinolinone, 4-ethyl-1-methyl- (CA INDEX NAME)



IC ICM C09B023-02
ICS G01N033-52; G01N033-68; G01N033-58; C12Q001-68
CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 9
IT 305801-52-9P 305801-68-7P
RL: IMF (Industrial manufacture); PREP (Preparation)
(dye **precursor**; production of azabenzazolium cyanine dyes for fluorescent biol. stains)
IT 305801-48-3P 305801-50-7P 305801-54-1P 305801-56-3P
305801-58-5P 305801-60-9P 305801-62-1P 305801-64-3P
305801-66-5P 305801-70-1P 305801-71-2P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(dye **precursor**; production of azabenzazolium cyanine dyes for fluorescent biol. stains)
IT 74-88-4, Methyl iodide, reactions 108-24-7, Acetic anhydride
109-72-8, Butyllithium, reactions 109-89-7, Diethylamine, reactions 110-95-2, Tetramethyl-1,3-propanediamine 491-35-0, Lepidine 591-51-5, Phenyllithium **1843-89-6**, 6-Methoxy-1,4-dimethyl-2-quinolone 2304-00-9, N,N'-Dimethylformamidine **2540-30-9**, 4-Methyl-1-phenyl-2-quinolone **2584-47-6**, 1,4-Dimethyl-2-quinolone 2637-34-5, 2-Mercaptopyridine 2783-70-2 4885-19-2, 4-Bromobenzyldiethylamine 5652-79-9, Malonaldehyde dianil 16867-03-1, 2-Amino-3-hydroxypyridine 26372-53-2, 3-Acetoxy-2-acetamidopyridine 41626-14-6, 1,4-Dimethylquinolinium p-tosylate 42952-26-1, 1,2-Dimethylquinolinium p-tosylate 58992-59-9, 1-(3-Iodopropyl)-4-methylquinolinium iodide 77673-47-3 78105-28-9, 1,4-Dimethylpyridinium p-tosylate **111724-59-5**, 7-Methoxy-1,4-dimethyl-2-quinolone 305802-25-9, 1-Ethyl-6,7-methylenedioxy-4-methyl-2-quinolone **305802-26-0**, 6,7-Dimethoxy-1,4-dimethyl-2-quinolone 305802-28-2 **305802-29-3**, 4-Ethyl-1-methyl-2-quinolone 305802-31-7 305802-33-9
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(dye starting material; production of azabenzazolium cyanine dyes for

fluorescent biol. stains)
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 9 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:733056 HCAPLUS Full-text
DOCUMENT NUMBER: 131:348787
TITLE: Photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for the detection and isolation of biomolecules
INVENTOR(S): Rothschild, Kenneth J.; Sonar, Sanjay M.; Olejnik, Jerzy
PATENT ASSIGNEE(S): Trustees of Boston University, USA
SOURCE: U.S., 65 pp., Cont.-in-part of U.S. Ser. No. 240,511.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5986076	A	19991116	US 1994-345807	19941122
US 5643722	A	19970701	US 1994-240511	19940511
CA 2189848	A1	19951123	CA 1995-2189848	19950511
WO 9531429	A1	19951123	WO 1995-US5555	19950511
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN				
AU 9526359	A	19951205	AU 1995-26359	19950511
JP 10500409	T	19980113	JP 1995-529698	19950511
EP 1415995	A2	20040506	EP 2003-78381	19950511
EP 1415995	A3	20040512		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
US 6057096	A	20000502	US 1995-479389	19950607
US 5922858	A	19990713	US 1997-884325	19970627

US 5948624	A	19990907	US 1997-978897	199711 26
US 6210941	B1	20010403	US 1999-290325	199904 12
US 6344320	B1	20020205	US 1999-307579	199905 07
US 6596481	B1	20030722	US 1999-335018	199906 17
US 6589736	B1	20030708	US 2000-504001	200002 14
US 6358689	B1	20020319	US 2000-583243	200005 31
US 2002123032	A1	20020905	US 2001-943120	200108 30
US 6566070	B2	20030520		
US 2003059785	A1	20030327	US 2001-34736	200112 27
US 6919179	B2	20050719		
US 2003162198	A1	20030828	US 2002-264126	200210 03
US 6949341	B2	20050927		
US 2003190680	A1	20031009	US 2002-264336	200210 03
US 2004053217	A1	20040318	US 2003-396960	200303 25
US 7195874	B2	20070327		
US 2004033514	A1	20040219	US 2003-401251	200303 27
US 7169558	B2	20070130		
US 2005074748	A1	20050407	US 2003-396095	200309 08
US 2006024704	A1	20060202	US 2005-145781	200506 06
US 7211394	B2	20070501		
JP 2006006328	A	20060112	JP 2005-174413	200506 14
US 2007020643	A1	20070125	US 2006-326021	200601 05
US 7312038	B2	20071225		
US 2006275750	A1	20061207	US 2006-364476	200602 28
US 2007172849	A1	20070726	US 2006-589425	200610

US 2007148680	A1	20070628	US 2006-639121		20061214
PRIORITY APPLN. INFO.:			US 1994-240511	A2	19940511
			US 1994-345807	A	19941122
			EP 1995-921230	A3	19950511
			JP 1995-529698	A3	19950511
			WO 1995-US5555	W	19950511
			US 1995-479389	A1	19950607
			US 1995-487909	B1	19950607
			US 1997-884325	A1	19970627
			US 1999-290325	A1	19990412
			US 1999-307579	A1	19990507
			US 1999-335018	A1	19990617
			US 2000-504001	A1	20000214
			US 2000-583243	A1	20000531
			US 2000-605483	B1	20000628

US 2001-943120	A1	200108 30
US 2001-34736	A1	200112 27
US 2002-264336	B1	200210 03
US 2003-401251	A1	200303 27
US 2003-396095	A1	200309 08
US 2005-145781	A1	200506 06

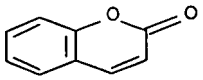
OTHER SOURCE(S): MARPAT 131:348787

AB This invention relates to agents and **conjugates** that can be used to detect and isolate target components from complex mixts. such as nucleic acids from biol. samples, cells from bodily fluids, and nascent proteins from translation reactions. Agents comprise a detectable moiety bound to a photoreactive moiety. **Conjugates** comprise agents coupled to substrates by covalent bonds which can be selectively cleaved with the administration of electromagnetic radiation. Target substances labeled with detectable mols. can be easily identified and separated from a heterologous mixture of substances. Exposure of the **conjugate** to radiation releases the target in a functional form and completely unaltered. Using photocleavable mol. **precursors** as the **conjugates**, label can be incorporated into macromols., the nascent macromols. isolated and the label completely removed. The invention also relates to targets isolated with these **conjugates** which may be useful as pharmaceutical agents or compns. that can be administered to humans and other mammals. Useful compns. include biol. agents such as nucleic acids, proteins, lipids and cytokines. **Conjugates** can also be used to monitor the pathway and half-life of pharmaceutical composition in vivo and for diagnostic, therapeutic and prophylactic purposes. The invention also relates to kits comprised of agents and **conjugates** that can be used for the detection of diseases, disorders and nearly any individual substance in a complex background of substances. Photocleavable biotin compds. were prepared and incorporated into proteins, DNA, and nucleic acid probes.

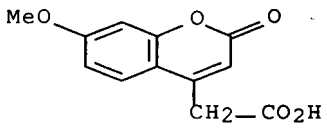
IT **91-64-5D**, Coumarin, **conjugates** with photoreactive moieties
RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); **RACT (Reactant or reagent)**; USES (Uses)
(photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

RN 91-64-5 HCAPLUS

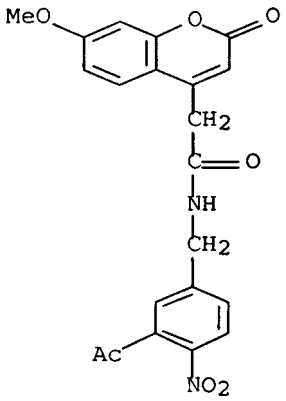
CN 2H-1-Benzopyran-2-one (CA INDEX NAME)



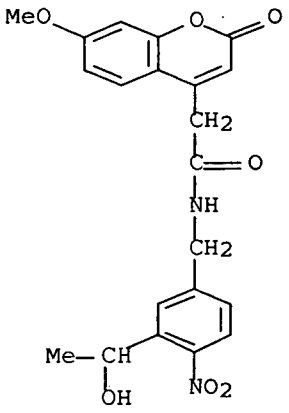
IT **62935-72-2**, 7-Methoxycoumarin-4-acetic acid
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)
RN 62935-72-2 HCAPLUS
CN 2H-1-Benzopyran-4-acetic acid, 7-methoxy-2-oxo- (CA INDEX NAME)



IT **174406-70-3P 174406-71-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)
RN 174406-70-3 HCAPLUS
CN 2H-1-Benzopyran-4-acetamide, N-[(3-acetyl-4-nitrophenyl)methyl]-7-methoxy-2-oxo- (CA INDEX NAME)



RN 174406-71-4 HCAPLUS
CN 2H-1-Benzopyran-4-acetamide, N-[[3-(1-hydroxyethyl)-4-nitrophenyl]methyl]-7-methoxy-2-oxo- (CA INDEX NAME)



IC ICM C07H019-00
ICS C12Q001-68; A01N037-18; A61K039-245
INCL 536022100
CC 9-14 (Biochemical Methods)
Section cross-reference(s): 3, 8, 26, 28, 63
ST photocleavable reagent **conjugate** biomol detection isolation; biotin photocleavable compd labeling protein DNA; nucleic acid probe photocleavable biotin compd; pharmaceutical photocleavable reagent **conjugate**; macromol photocleavable reagent **conjugate**
IT DNA
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(PCR amplification and photocleavable biotin labeling of; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)
IT Magnetic materials
(as detectable moieties; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)
IT Proteins, general, preparation
RL: ARG (Analytical reagent use); PEP (Physical, engineering or chemical process); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(as detectable moieties; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)
IT Antibodies
Antigens
Peptides, reactions
RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)
(as detectable moieties; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)
IT Nucleic acids
RL: ARG (Analytical reagent use); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(as detectable moieties; photocleavable agents and **conjugates** having detectable moieties and photoreactive

moieties for detection and isolation of biomols.)

IT Avidins
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(**conjugates** with agarose beads, photocleavable biotin-leu-enkephalin binding to and photorelease from; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT Drugs
(**conjugates** with photocleavable agents; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT Electric charge
(detectable moieties having; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT Immunoglobulins
RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)
(fragments, as detectable moieties; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT Nucleoside triphosphates
Nucleotides, properties
RL: PRP (Properties)
(in bioreactive agents for forming **conjugates**; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT tRNA
RL: RCT (Reactant); RACT (Reactant or reagent)
(lysine-specific, misaminoacylation or photocleavable biotin labeling of; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT Drug delivery systems
Spectroscopy
(photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT Lipids, uses
RL: NUU (Other use, unclassified); USES (Uses)
(photocleavable biotin labeled, in liposomes; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT Liposomes
(photocleavable biotin labeled; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT Probes (nucleic acid)
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(photocleavable biotin labeled; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT RNA
RL: SPN (Synthetic preparation); PREP (Preparation)
(photocleavable biotin labeled; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT Amino acids, preparation
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(reaction products with photocleavable biotin; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT Oligonucleotides
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of, with photocleavable biotin phosphoramidites; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT Nucleic acid hybridization
(using photocleavable biotin labeled nucleic acid probes; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT 122921-85-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(aminoacylation of, with photocleavable biotin-labeled lysine; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT 250610-51-6D, substrate-bound 250610-52-7D, substrate-bound
250610-53-8D, substrate-bound 250610-54-9D, substrate-bound
250610-55-0D, substrate-bound 250610-56-1D, substrate-bound
250610-57-2D, substrate-bound
RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)
(as **conjugate**; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT 250610-58-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(as photocleavable agent; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT 174406-72-5P 250610-59-4P 250610-62-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(as photocleavable agent; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT 250610-66-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(as photocleavable biotin phosphoramidite; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT 9012-36-6D, Agarose, avidin **conjugates**
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(beads, photocleavable biotin-leu-enkephalin binding to and photorelease from; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT 250610-70-9DP, aminoacylated with photocleavable biotin-labeled lysine, ligated to tRNA
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(for synthesis of labeled proteins; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT 250610-68-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(in PCR amplification and labeling of DNA; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT 87424-17-7P 87424-19-9P 250610-69-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(in dinucleotide synthesis; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT 250610-67-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(in preparation of photocleavable biotin labeled RNA; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT 58-85-5D, Biotin, **conjugates** with photoreactive moieties **91-64-5D**, Coumarin, **conjugates** with photoreactive moieties 605-65-2D, Dansyl chloride, **conjugates** with photoreactive moieties 2321-07-5D, Fluorescein, derivs., **conjugates** with photoreactive moieties 13558-31-1D, derivs., **conjugates** with photoreactive moieties
RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); **RACT (Reactant or reagent)**; USES (Uses)
(photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT 2840-26-8, 3-Amino-4-methoxybenzoic acid 3113-72-2, 5-Methyl-2-nitrobenzoic acid 6851-99-6, 2-Bromo-2'-nitroacetophenone 7719-09-7, Thionyl chloride 40615-36-9 **62935-72-2**, 7-Methoxycoumarin-4-acetic acid 72040-64-3, 6-Biotinamidocaproic acid 74124-79-1, N,N'-Disuccinimidyl carbonate 89992-70-1, 2-Cyanoethyl-N,N-diisopropylchlorophosphoramidite 90015-82-0
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT 23082-65-7P 38818-49-4P 69976-70-1P, 5-Methyl-2-nitroacetophenone 99821-59-7P, 5-Bromomethyl-2-nitroacetophenone 130017-51-5P, 2-Nitro-4-methoxy-5-(N-acetyl)aminobenzoic acid 141468-63-5P, 6-Biotinamidocaproyl chloride 166983-70-6P 166983-74-0P **174406-70-3P 174406-71-4P** 174406-74-7P 174406-75-8P 250610-51-6P 250610-57-2P 250610-60-7P 250610-61-8P 250610-63-0P 250610-64-1P 250610-65-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)

IT 9013-20-1D, Streptavidin, support-bound
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(photocleavable biotin-labeled compds. capturing by; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation

of biomols.)
IT 56-87-1D, L-Lysine, photocleavable biotin compds., reactions
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(preparation and isolation of proteins containing; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)
IT 58-61-7, Adenosine, reactions 951-77-9, Deoxycytidine
RL: RCT (Reactant); RACT (Reactant or reagent)
(protection of, in dinucleotide synthesis; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)
IT 58822-25-6, Leucine-enkephalin
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with photocleavable biotin-NHS ester; photocleavable agents and **conjugates** having detectable moieties and photoreactive moieties for detection and isolation of biomols.)
REFERENCE COUNT: 75 THERE ARE 75 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 10 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:595189 HCAPLUS Full-text
DOCUMENT NUMBER: 131:204415
TITLE: Composition containing glucopyranoside a **precursor** capable of being hydrolyzed by glucocerebrosidase for treating skin aging and diseases
INVENTOR(S): Redoules, Daniel; Tarroux, Roger; Perie, Jean-jacques
PATENT ASSIGNEE(S): Pierre Fabre Dermo-Cosmetique, Fr.
SOURCE: PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9946273	A1	19990916	WO 1999-FR521	19990309
W: CA, JP, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
FR 2775976	A1	19990917	FR 1998-2888	19980310
FR 2775976	B1	20000602		
CA 2367548	A1	19990916	CA 1999-2367548	19990309
EP 1062223	A1	20001227	EP 1999-908998	19990309
EP 1062223	B1	20070801		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,				

PT, IE, FI, CY				
AT 368681	T	20070815	AT 1999-908998	199903 09
US 6569906	B1	20030527	US 2001-856220	200105 18
PRIORITY APPLN. INFO.:			FR 1998-2888	A 199803 10
			WO 1999-FR521	W 199903 09

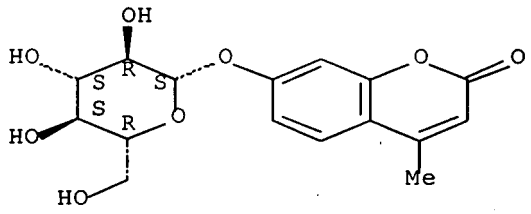
AB The invention concerns a glucopyranoside composition capable of being hydrolyzed by a cutaneous enzyme, glucocerebrosidase. The active **precursor** is advantageously a gluco-**conjugate** derived from phenol whereof the two α carbons are free. The invention also concerns the use of said compns. against light-induced skin aging or for making a medicine for treating certain skin diseases. Finally the invention concerns novel glucosylated compds.

IT **18997-57-4**
RL: BUU (Biological use, unclassified); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); **RACT (Reactant or reagent)**; USES (Uses)
(composition containing glucopyranoside a **precursor** capable of being hydrolyzed by glucocerebrosidase for treating skin aging and diseases)

RN 18997-57-4 HCAPLUS

CN 2H-1-Benzopyran-2-one, 7-(β-D-glucopyranosyloxy)-4-methyl- (CA INDEX NAME)

Absolute stereochemistry.



IC ICM C07H017-065
ICS A61K007-48; C07H015-203

CC 62-4 (Essential Oils and Cosmetics)
Section cross-reference(s): 7, 9, 33

IT Skin, disease
(aging; composition containing glucopyranoside a **precursor** capable of being hydrolyzed by glucocerebrosidase for treating skin aging and diseases)

IT Antioxidants
Skin, disease
(composition containing glucopyranoside a **precursor** capable of being hydrolyzed by glucocerebrosidase for treating skin aging and diseases)

IT Glycoconjugates
RL: BUU (Biological use, unclassified); RCT (Reactant); THU

(Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(composition containing glucopyranoside a **precursor** capable of being hydrolyzed by glucocerebrosidase for treating skin aging and diseases)

IT Hydrolysis
(enzymic; composition containing glucopyranoside a **precursor** capable of being hydrolyzed by glucocerebrosidase for treating skin aging and diseases)

IT Skin
(epidermis; composition containing glucopyranoside a **precursor** capable of being hydrolyzed by glucocerebrosidase for treating skin aging and diseases)

IT Glycosides
RL: BUU (Biological use, unclassified); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(glucopyranosides; composition containing glucopyranoside a **precursor** capable of being hydrolyzed by glucocerebrosidase for treating skin aging and diseases)

IT 59-02-9P, α-Tocopherol 90-33-5P, 4-Methylumbelliferone 108-95-2P, Phenol, preparation 542-78-9P, Malonaldehyde 7616-22-0P
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(composition containing glucopyranoside a **precursor** capable of being hydrolyzed by glucocerebrosidase for treating skin aging and diseases)

IT 119-13-1, δ-Tocopherol 119-98-2, Tocol 1464-44-4 **18997-57-4** 102340-61-4 113973-04-9 242143-12-0 242143-13-1
RL: BUU (Biological use, unclassified); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); **RACT (Reactant or reagent)**; USES (Uses)
(composition containing glucopyranoside a **precursor** capable of being hydrolyzed by glucocerebrosidase for treating skin aging and diseases)

IT 103-90-2, Paracetamol 129-20-4, Oxyphenylbutazone 395-28-8, Isoxsuprine 709-55-7, Etilefrin 4991-65-5, Tioxolone 18979-53-8, p-Pentyloxyphenol 75716-11-9 197647-08-8 241814-59-5 241814-60-8 241814-61-9 242143-14-2
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(composition containing glucopyranoside a **precursor** capable of being hydrolyzed by glucocerebrosidase for treating skin aging and diseases)

IT 37228-64-1, Glucocerebrosidase
RL: CAT (Catalyst use); USES (Uses)
(composition containing glucopyranoside a **precursor** capable of being hydrolyzed by glucocerebrosidase for treating skin aging and diseases)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

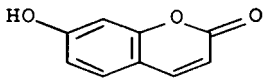
L24 ANSWER 11 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:534580 HCAPLUS Full-text
DOCUMENT NUMBER: 131:348641
TITLE: A fluorescent probe for the detection of NAD(P)H
AUTHOR(S): Roeschlaub, Carl A.; Maidwell, Nicola L.; Reza Rezai, M.; Sammes, Peter G.

CORPORATE SOURCE: Department of Chemistry, Molecular Probes Unit, School of Physical Sciences, Guildford, Surrey, GU2 5XH, UK
SOURCE: Chemical Communications (Cambridge) (1999), (17), 1637-1638
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English

AB NAD(P)H may be monitored by using reduction to release the fluorophore umbelliferone from a **precursor conjugate** with a quinoxalinium salt.

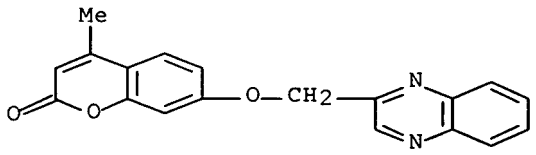
IT **93-35-6**, Umbelliferone
RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); **RACT (Reactant or reagent)**; USES (Uses)
(a fluorescent probe for detection of NAD(P)H)

RN 93-35-6 HCAPLUS
CN 2H-1-Benzopyran-2-one, 7-hydroxy- (CA INDEX NAME)



IT **250586-94-8P 250586-96-0P 250586-98-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(a fluorescent probe for detection of NAD(P)H)

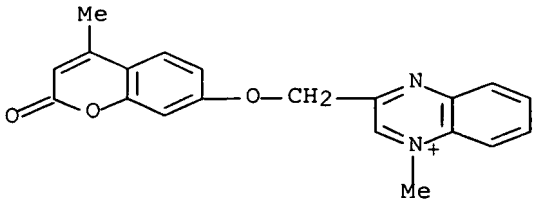
RN 250586-94-8 HCAPLUS
CN 2H-1-Benzopyran-2-one, 4-methyl-7-(2-quinoxalinylmethoxy)- (CA INDEX NAME)



RN 250586-96-0 HCAPLUS
CN Quinoxalinium, 1-methyl-3-[[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)oxy]methyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

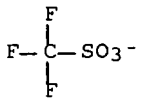
CM 1

CRN 250586-95-9
CMF C20 H17 N2 O3

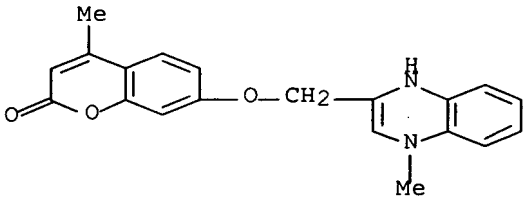


CM 2

CRN 37181-39-8
CMF C F3 O3 S



RN 250586-98-2 HCAPLUS
CN 2H-1-Benzopyran-2-one, 7-[(1,4-dihydro-4-methyl-2-quinoxalinyl)methoxy]-4-methyl- (CA INDEX NAME)



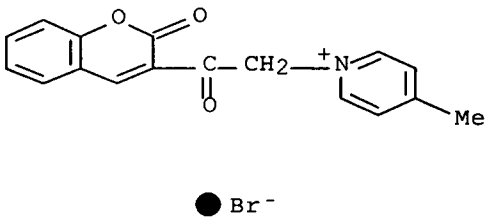
CC 9-5 (Biochemical Methods)
IT **93-35-6**, Umbelliferone 48123-30-4
RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); **RACT (Reactant or reagent)**; USES (Uses)
(a fluorescent probe for detection of NAD(P)H)
IT 54804-43-2P **250586-94-8P 250586-96-0P**
250586-98-2P 250586-99-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(a fluorescent probe for detection of NAD(P)H)
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 12 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:178318 HCAPLUS Full-text
DOCUMENT NUMBER: 130:297944
TITLE: Synthesis and study of cyanine dyes containing two **conjugated** chromophores
AUTHOR(S): Yagodinets, P. I.

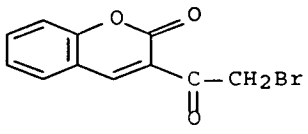
CORPORATE SOURCE: Fed'kovich Chernovtsy State University, Chernovtsy, Ukraine
SOURCE: Russian Journal of General Chemistry (Translation of Zhurnal Obshchei Khimii) (1998), 68(8), 1252-1255
CODEN: RJGCEK; ISSN: 1070-3632
PUBLISHER: MAIK Nauka/Interperiodica Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Biscyanine dyes have been synthesized by reactions of 4-methyl-N-(2-oxochromen-3-ylcarbonylmethyl)pyridinium bromide with p-(dimethylamino)benzaldehyde, p-(diethylamino)benzaldehyde, and 1,3,3-trimethylindolin-2-ylideneacetaldehyde. The distance between the absorption maxima in the electronic spectra of the biscyanines is greater than the distance between the corresponding maxima in the spectra of the parent monocyanine dyes. The angles between the chromophore axes and the degree of chromophore interaction have been calculated

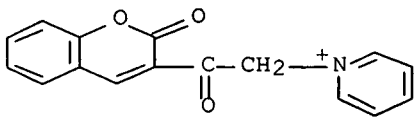
IT **223240-09-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(dye **precursor**; preparation of cyanine dyes containing two **conjugated** chromophores)
RN 223240-09-3 HCAPLUS
CN Pyridinium, 4-methyl-1-[2-oxo-2-(2-oxo-2H-1-benzopyran-3-yl)ethyl]-, bromide (9CI) (CA INDEX NAME)



IT **29310-88-1**, 3-(Bromoacetyl)coumarin **161266-45-1**
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(starting material; preparation of cyanine dyes containing two **conjugated** chromophores)
RN 29310-88-1 HCAPLUS
CN 2H-1-Benzopyran-2-one, 3-(2-bromoacetyl)- (CA INDEX NAME)



RN 161266-45-1 HCAPLUS
CN Pyridinium, 1-[2-oxo-2-(2-oxo-2H-1-benzopyran-3-yl)ethyl]-, bromide (9CI) (CA INDEX NAME)



● Br-

CC 41-6 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 73
ST cyanine dye prepn bichromophoric **conjugated**
IT Molecular structure-property relationship
(UV spectra; for cyanine dyes containing two **conjugated** chromophores)
IT Bond angle
(dihedral; of prepared cyanine dyes containing two **conjugated** chromophores)
IT UV and visible spectra
(of prepared cyanine dyes containing two **conjugated** chromophores)
IT Cyanine dyes
(preparation of cyanine dyes containing two **conjugated** chromophores)
IT Molecular structure-property relationship
(visible spectra; for cyanine dyes containing two **conjugated** chromophores)
IT **223240-09-3P** 223240-17-3P, 4-Methyl-1-(1-naphthylmethyl)pyridinium perchlorate
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(dye **precursor**; preparation of cyanine dyes containing two **conjugated** chromophores)
IT 223240-10-6P 223240-11-7P 223240-12-8P 223240-13-9P 223240-14-0P 223240-15-1P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dye; preparation of cyanine dyes containing two **conjugated** chromophores)
IT 223240-19-5P 223240-21-9P 223240-23-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(dye; preparation of cyanine dyes containing two **conjugated** chromophores)
IT 84-83-3, 1,3,3-Trimethylindolin-2-ylideneacetaldehyde 86-52-2, 1-(Chloromethyl)naphthalene 100-10-7, p-(Dimethylamino)benzaldehyde 108-89-4 120-21-8, p-(Diethylamino)benzaldehyde **29310-88-1**, 3-(Bromoacetyl)coumarin **161266-45-1**
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(starting material; preparation of cyanine dyes containing two **conjugated** chromophores)
REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 13 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:161185 HCAPLUS Full-text
DOCUMENT NUMBER: 124:197760
TITLE: Photocleavable agents and conjugates for the detection and isolation of biomolecules.
INVENTOR(S): Rothschild, Kenneth J.; Sonar, Sanjay M.; Olejnik, Jerzy
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 149 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9531429	A1	19951123	WO 1995-US5555	19950511
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN				
US 5643722	A	19970701	US 1994-240511	19940511
US 5986076	A	19991116	US 1994-345807	19941122
AU 9526359	A	19951205	AU 1995-26359	19950511
EP 763009	A1	19970319	EP 1995-921230	19950511
EP 763009	B1	20040908		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 10500409	T	19980113	JP 1995-529698	19950511
EP 1415995	A2	20040506	EP 2003-78381	19950511
EP 1415995	A3	20040512		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
AT 275539	T	20040915	AT 1995-921230	19950511
US 6210941	B1	20010403	US 1999-290325	19990412
US 6344320	B1	20020205	US 1999-307579	19990507
US 6596481	B1	20030722	US 1999-335018	19990617

US 6358689	B1	20020319	US 2000-583243	200005 31
US 2002123032	A1	20020905	US 2001-943120	200108 30
US 6566070	B2	20030520		
US 2003059785	A1	20030327	US 2001-34736	200112 27
US 6919179	B2	20050719		
US 2004033514	A1	20040219	US 2003-401251	200303 27
US 7169558	B2	20070130		
US 2006024704	A1	20060202	US 2005-145781	200506 06
US 7211394	B2	20070501		
US 2007172849	A1	20070726	US 2006-589425	200610 30
US 2007148680	A1	20070628	US 2006-639121	200612 14

PRIORITY APPLN. INFO.:	US 1994-240511	A	199405 11
	US 1994-345807	A	199411 22
	EP 1995-921230	A3	199505 11
	WO 1995-US5555	W	199505 11
	US 1997-884325	A1	199706 27
	US 1999-290325	A1	199904 12
	US 1999-307579	A1	199905 07
	US 1999-335018	A1	199906 17
	US 2000-583243	A1	200005 31

US 2000-605483	B1	200006 28
US 2001-943120	A1	200108 30
US 2001-34736	A1	200112 27
US 2003-401251	A1	200303 27
US 2005-145781	A1	200506 06

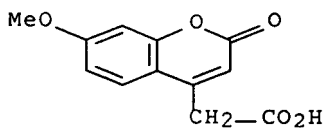
OTHER SOURCE(S): MARPAT 124:197760

AB This invention relates to agents and **conjugates** that can be used to detect and isolate target components from complex mixts. such as nucleic acids from biol. samples, cells from bodily fluids, and nascent proteins from translation reactions. Agents comprise a detectable moiety bound to a photoreactive moiety. **Conjugates** comprise agents coupled to substrates by covalent bonds which can be selectively cleaved with the administration of electromagnetic radiation. Target substances labeled with detectable mols. can be easily identified and separated from a heterologous mixture of substances. Exposure of the **conjugate** to radiation releases the target in a functional form and completely unaltered. Using photocleavable mol. **precursors** as the **conjugates**, label can be incorporated into macromols., the nascent macromols. isolated, and the label completely removed. The invention also relates to targets isolated with these **conjugates** which may be useful as pharmaceutical agents or compns. that can be administered to humans and other mammals. Useful compns. include biol. agents such as nucleic acids, proteins, lipids and cytokines. **Conjugates** can also be used to monitor the pathway and half-life of pharmaceutical compns. in vivo and for diagnostic, therapeutic and prophylactic purposes. The invention also relates to kits comprised of agents and **conjugates** that can be used for the detection of diseases, disorders and nearly any individual substance in a complex background of substances.

IT **62935-72-2**
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(photocleavable agents and **conjugates** for detection and isolation of biomols.)

RN 62935-72-2 HCAPLUS

CN 2H-1-Benzopyran-4-acetic acid, 7-methoxy-2-oxo- (CA INDEX NAME)

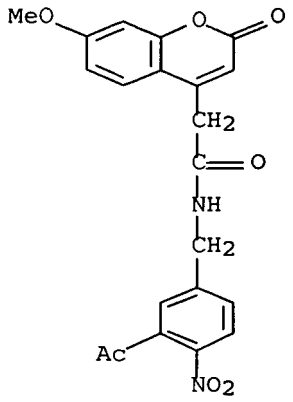


IT **174406-70-3P 174406-71-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**

(photocleavable agents and **conjugates** for detection and isolation of biomols.)

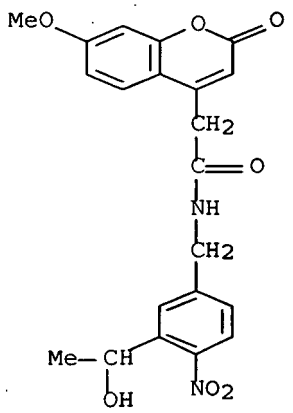
RN 174406-70-3 HCAPLUS

CN 2H-1-Benzopyran-4-acetamide, N-[(3-acetyl-4-nitrophenyl)methyl]-7-methoxy-2-oxo- (CA INDEX NAME)



RN 174406-71-4 HCAPLUS

CN 2H-1-Benzopyran-4-acetamide, N-[[3-(1-hydroxyethyl)-4-nitrophenyl]methyl]-7-methoxy-2-oxo- (CA INDEX NAME)



IC C07C205-00; C07C205-06; C07C205-07; C07D235-02; C07H001-06; C07H001-08; C07H021-02; C07H021-04; C07K001-02; C07K001-04; C07K001-08; C07K001-10

CC 9-15 (Biochemical Methods)
Section cross-reference(s): 1, 3, 14

ST photocleavable agent **conjugate** biomol detection isolation; disease diagnosis photocleavable agent; drug therapy photocleavable agent; nucleic acid detection isolation photocleavable agent; biopolymer detection isolation photocleavable agent; biotin photocleavable deriv biomol detection isolation

IT Phosphatidylethanolamines
Phosphatidylserines
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)

(acylated, photocleavable biotin **conjugates**; photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Transplant and Transplantation
(bone marrow; photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Amino acids, preparation
Peptides, preparation
RL: ARG (Analytical reagent use); NUU (Other use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(**conjugates** with photocleavable agents; photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT 2,4-Dinitrophenyl group
Animal tissue
Animal tissue culture
Antibiotics
Bacteria
Biotinylation
Blood
Body fluid
Cell
Ceramic materials and wares
Cholera
Chromatography
Diagnosis
Electromagnetic wave
Fluorescent substances
Hematopoietic **precursor** cell
Immunomodulators
Infection
Infrared radiation
Light
Liposome
Lymph
Magnetic substances
Micelles
Microwave
Neoplasm
Nucleic acid hybridization
Parasite
Pharmaceutical analysis
Pharmaceuticals
Photochemistry
Photolysis
Physiological saline solutions
Polymerase chain reaction
Radio wave
Semiconductor materials
Therapeutics
Ultraviolet radiation
Vaccines
Virus
(photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Biopolymers
Enzymes
Fatty acids, analysis
Lipids, analysis

Lymphokines and Cytokines
Neoplasm inhibitors
Nucleic acids
Nucleosides, analysis
Polysaccharides, analysis
Proteins, analysis
Ribonucleic acids, transfer
Toxins
RL: ANT (Analyte); PUR (Purification or recovery); ANST (Analytical study); PREP (Preparation)
(photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Deoxyribonucleic acids
RL: ANT (Analyte); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
(photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Ribonucleic acids
RL: ANT (Analyte); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
(photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Luminescent substances
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Antibodies
Avidins
Carbohydrates and Sugars, uses
Glycoproteins, uses
Halides
Haptens
Hormone receptors
Hormones
Nitroxides
Radioelements, uses
Receptors
RL: ARG (Analytical reagent use); NUU (Other use, unclassified); ANST (Analytical study); USES (Uses)
(photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Glass, oxide
RL: ARU (Analytical role, unclassified); NUU (Other use, unclassified); ANST (Analytical study); USES (Uses)
(photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Metals, analysis
RL: ARU (Analytical role, unclassified); NUU (Other use, unclassified); ANST (Analytical study); USES (Uses)
(photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Plastics
RL: ARU (Analytical role, unclassified); NUU (Other use, unclassified); ANST (Analytical study); USES (Uses)
(photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Collagens, biological studies
RL: BUU (Biological use, unclassified); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses)

(photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Glycerides, biological studies
RL: BUU (Biological use, unclassified); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses)
(photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Oils
RL: BUU (Biological use, unclassified); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses)
(photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Antigens
RL: ANT (Analyte); ANST (Analytical study)
(CD3, photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Antigens
RL: ANT (Analyte); ANST (Analytical study)
(CD34, photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Onium compounds
RL: ARG (Analytical reagent use); NUU (Other use, unclassified); ANST (Analytical study); USES (Uses)
(acridinium, photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Molecules
(biochem., photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Macromolecular compounds
RL: ANT (Analyte); PUR (Purification or recovery); ANST (Analytical study); PREP (Preparation)
(biol., photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Therapeutics
(chemo-, photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Virus, animal
(cytomegalo-, photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Magnetic substances
(dia-, photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Digestive tract
(disease, gastroenteritis, photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Genetics
(disorders, photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Virus, animal
(entero-, photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Immunoassay
(enzyme-linked immunosorbent assay, photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Magnetic substances
(ferro-, photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Embryo
(fetus, photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT Virus, animal
(hepatitis B, photocleavable agents and **conjugates** for detection and isolation of biomols.)
IT Receptors
RL: ARG (Analytical reagent use); NUU (Other use, unclassified); ANST (Analytical study); USES (Uses)
(hormone, photocleavable agents and **conjugates** for detection and isolation of biomols.)
IT Virus, animal
(human T-cell leukemia type I, photocleavable agents and **conjugates** for detection and isolation of biomols.)
IT Virus, animal
(human immunodeficiency, photocleavable agents and **conjugates** for detection and isolation of biomols.)
IT Nucleic acid hybridization
(in situ, photocleavable agents and **conjugates** for detection and isolation of biomols.)
IT Body fluid
(interstitial, photocleavable agents and **conjugates** for detection and isolation of biomols.)
IT Ribonucleic acids, transfer
RL: SPN (Synthetic preparation); PREP (Preparation)
(lysine-specific, photocleavable agents and **conjugates** for detection and isolation of biomols.)
IT Nucleotides, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(oligo-, photocleavable agents and **conjugates** for detection and isolation of biomols.)
IT Virus, animal
(papilloma, photocleavable agents and **conjugates** for detection and isolation of biomols.)
IT Magnetic substances
(para-, photocleavable agents and **conjugates** for detection and isolation of biomols.)
IT Cell
(stem, photocleavable agents and **conjugates** for detection and isolation of biomols.)
IT Bone marrow
(transplant, photocleavable agents and **conjugates** for detection and isolation of biomols.)
IT 7553-56-2, Iodine, uses 7726-95-6, Bromine, uses 7782-41-4, Fluorine, uses 7782-50-5, Chlorine, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(photocleavable agents and **conjugates** for detection and isolation of biomols.)
IT 260-94-6, Acridine 7440-18-8D, Ruthenium, chelates 9013-20-1, Streptavidin 11028-71-0, Concanavalin A 14809-11-1D, Phosphoramidous acid, derivs., linkers 73467-76-2, Benzopyrene
RL: ARG (Analytical reagent use); NUU (Other use, unclassified); ANST (Analytical study); USES (Uses)
(photocleavable agents and **conjugates** for detection and isolation of biomols.)
IT 58-85-5DP, Biotin, photocleavable derivs. 91-64-5DP, Coumarin, photocleavable derivs. 605-65-2DP, Dansyl chloride, photocleavable derivs. 2321-07-5DP, photocleavable derivs. 13558-31-1DP, photocleavable derivs. 166983-72-8P 174406-67-8P 174406-69-0P 174406-72-5P
RL: ARG (Analytical reagent use); NUU (Other use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP

(Preparation); USES (Uses)
(photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT 9012-36-6, Agarose
RL: ARU (Analytical role, unclassified); NUU (Other use, unclassified); ANST (Analytical study); USES (Uses)
(photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT 9012-90-2, DNA polymerase 9014-24-8, RNA polymerase 9027-67-2, Terminal deoxynucleotidyl transferase
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT 56-84-8, Aspartic acid, reactions 56-86-0, Glutamic acid, reactions 58-61-7, Adenosine, reactions 100-97-0, reactions 105-53-3, Diethyl malonate 951-77-9, Deoxycytidine 2840-26-8, 3-Amino-4-methoxybenzoic acid 3113-72-2, 5-Methyl-2-nitrobenzoic acid 6851-99-6, 2-Bromo-2'-nitroacetophenone 17776-78-2 58822-25-6, Leucine-enkephalin **62935-72-2** 72040-64-3 74124-79-1, N,N'-Disuccinimidyl carbonate 89992-70-1, 2-Cyanoethyl-N,N-diisopropylchlorophosphoramidite 105409-84-5 147218-60-8 166983-74-0, 5-Aminomethyl-2-nitroacetophenone hydrochloride 174406-73-6
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT 23082-65-7P 38818-49-4P, 5-Methyl-2-nitrobenzoyl chloride 58822-25-6DP, Leucine-enkephalin, photocleavable biotin **conjugates** 69976-70-1P, 5-Methyl-2-nitroacetophenone 99821-59-7P, 5-Bromomethyl-2-nitroacetophenone 130017-51-5P 130017-52-6P, 2-Nitro-4-methoxy-5-(N-acetylamino)acetophenone 141468-63-5P 166983-70-6P 166983-71-7P 174157-59-6P 174406-66-7P 174406-68-9P **174406-70-3P** **174406-71-4P** 174406-74-7P 174406-75-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT 105409-84-5DP, photocleavable biotin **conjugates** 105434-72-8DP, photocleavable biotin **conjugates** 143908-73-0DP, photocleavable biotin **conjugates** 147218-60-8DP, photocleavable biotin **conjugates** 174157-60-9P 174157-61-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(photocleavable agents and **conjugates** for detection and isolation of biomols.)

IT 91-64-5P, Coumarin
RL: ARG (Analytical reagent use); NUU (Other use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(photocleavable derivs.; photocleavable agents and **conjugates** for detection and isolation of biomols.)

L24 ANSWER 14 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1995:621732 HCAPLUS Full-text
DOCUMENT NUMBER: 123:138159
TITLE: Fluorescent oxygen channeling immunoassays
INVENTOR(S): Davalian, Dariush; Singh, Rajendra; Ullman, Edwin F.

PATENT ASSIGNEE(S): Syntex (U.S.A.) Inc., USA
SOURCE: PCT Int. Appl., 71 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9506877	A1	19950309	WO 1994-US9705	19940829
W: CA, JP RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2170873	A1	19950309	CA 1994-2170873	19940829
EP 716746	A1	19960619	EP 1994-927258	19940829
EP 716746	B1	19990317		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
JP 09502520	T	19970311	JP 1995-508205	19940829
JP 3498960	B2	20040223		
AT 177842	T	19990415	AT 1994-927258	19940829
ES 2135597	T3	19991101	ES 1994-927258	19940829
US 5616719	A	19970401	US 1995-438154	19950509
US 5807675	A	19980915	US 1995-479743	19950607

PRIORITY APPLN. INFO.:			
US 1993-117365	A	19930903
WO 1994-US9705	W	19940829

OTHER SOURCE(S): MARPAT 123:138159

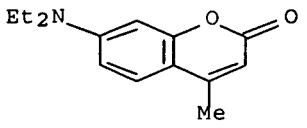
AB Methods are disclosed for determining an analyte in a medium suspected of containing the analyte. One method comprises treating a medium suspected of containing an analyte under conditions such that the analyte, if present, causes a photosensitizer and a photoactive indicator **precursor** mol. to come into close proximity. The photosensitizer generates singlet oxygen which activates the photoactive indicator **precursor** to generate a photoactive indicator mol. Upon irradiation with light the photoactive indicator mol. produces light, which is measured. The amount of light produced by the

photoactive indicator is related to the amount of analyte in the medium. Compns., kits, and compds. are also disclosed.

IT **91-44-1**, Coumarin-1
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(fluorescent oxygen channeling immunoassays for polynucleotide or other analyte determination)

RN 91-44-1 HCAPLUS

CN 2H-1-Benzopyran-2-one, 7-(diethylamino)-4-methyl- (CA INDEX NAME)



IC ICM G01N033-58
ICS G01N033-94; G01N033-569; G01N033-533; C12Q001-68; G01N033-542; C07D311-20

CC 9-10 (Biochemical Methods)
Section cross-reference(s): 64

IT Latex
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(photoactive indicator **precursor**-containing; fluorescent oxygen channeling immunoassays for polynucleotide or other analyte determination)

IT 9013-20-1P, Streptavidin
RL: ARG (Analytical reagent use); DEV (Device component use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(**conjugates** with photoactive indicator **precursor** latex; fluorescent oxygen channeling immunoassays for polynucleotide or other analyte determination)

IT 58-85-5DP, Biotin, **conjugate** with CTAATC-30mer
55843-71-5P, Benzenetellurenyl bromide 163923-07-7P 163923-08-8P 163923-09-9P
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(fluorescent oxygen channeling immunoassays for polynucleotide or other analyte determination)

IT **91-44-1**, Coumarin-1 586-77-6 591-51-5
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(fluorescent oxygen channeling immunoassays for polynucleotide or other analyte determination)

L24 ANSWER 15 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1993:642934 HCAPLUS Full-text
DOCUMENT NUMBER: 119:242934
TITLE: Photocleavage of DNA using organic oxyradicals
INVENTOR(S): Herkstroeter, William George; Farid, Samir Yacoub; Gould, Ian Robert; Chen, Chin Hsin; Jayaraman, Krishna; Specht, Donald P.
PATENT ASSIGNEE(S): Eastman Kodak Co., USA
SOURCE: PCT Int. Appl., 56 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

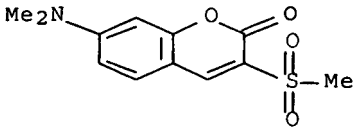
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9314104	A1	19930722	WO 1993-US256	19930113
W: CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
PRIORITY APPLN. INFO.:			US 1992-819905	A 19920113
			US 1993-1362	A 19930107

OTHER SOURCE(S): MARPAT 119:242934

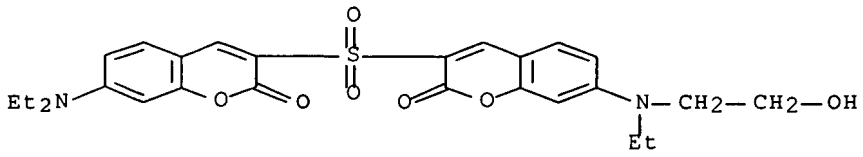
AB Compns. for photocleavage of DNA comprise an oligonucleotide **conjugated** to an organic oxyradical **precursor.** The **precursor** can produce an oxyradical by direct photoexcitation, or by accepting an electron from a dye followed by release of an oxyradical. Upon exposure of a solution containing the target DNA and the **conjugate** (and a dye if necessary) to activating light, an oxyradical is produced and the sugar-phosphate backbone of the target is cleaved. Alternatively, the oligonucleotide can be **conjugated** to the dye. A **conjugate** of acridine orange and M13-complementary oligonucleotide was prepared Exposure of a solution of M13, dye-oligonucleotide **conjugate**, and oxyradical **precursor** 1,5-bis-(stilbazole-N-oxide)-pentane to light of appropriate wavelength resulted in cleavage of M13 in only one confined region of the entire DNA sequence.

IT **151010-81-0 151010-82-1 151010-91-2**
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(in DNA selective photocleavage with oligonucleotide-dye or oligonucleotide-oxyradical **precursor conjugates**
)

RN 151010-81-0 HCAPLUS
CN 2H-1-Benzopyran-2-one, 7-(dimethylamino)-3-(methylsulfonyl)- (CA INDEX NAME)



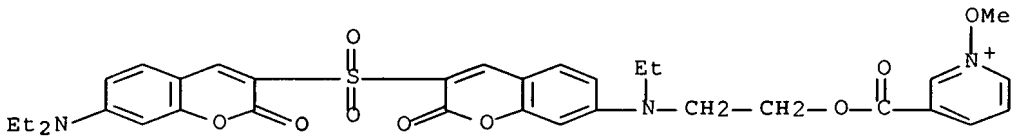
RN 151010-82-1 HCAPLUS
CN 2H-1-Benzopyran-2-one, 7-(diethylamino)-3-[[7-[ethyl(2-hydroxyethyl)amino]-2-oxo-2H-1-benzopyran-3-yl]sulfonyl]- (9CI) (CA INDEX NAME)



RN 151010-91-2 HCAPLUS
CN Pyridinium, 3-[[2-[[3-[[7-(diethylamino)-2-oxo-2H-1-benzopyran-3-yl]sulfonyl]-2-oxo-2H-1-benzopyran-7-yl]ethylamino]ethoxy]carbonyl]-1-methoxy-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

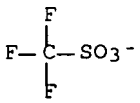
CM 1

CRN 151010-90-1
CMF C33 H34 N3 O9 S



CM 2

CRN 37181-39-8
CMF C F3 O3 S



IC ICM C07H021-00
ICS C07H001-00; C07D213-89; G03F007-031
CC 3-1 (Biochemical Genetics)
ST DNA photocleavage oligonucleotide dye **conjugate**; oxyradical **precursor** oligonucleotide **conjugate** DNA cleavage
IT Dyes
(**conjugates**, with oligonucleotides, in selective photocleavage of DNA by oxyradicals)
IT Radicals, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxy-, selective DNA photocleavage with, oligonucleotide-dye or oligonucleotide-oxyradical **precursor conjugates** in)
IT Deoxyribonucleic acids
RL: BIOL (Biological study)
(photocleavage of, selective, oligonucleotide-dye or

oligonucleotide-oxyradical **precursor conjugates** in)

IT Nucleotides, polymers
RL: BIOL (Biological study)
(oligo-, **conjugates**, with dye or oxyradical **precursor**, in DNA selective photocleavage)

IT 65-61-2 83-89-6, Quinacrine 117-92-0, Quinaldine red 134-50-9, 9-Aminoacridine hydrochloride 135-49-9, Acridine yellow 477-73-6, Safranine O 550-15-2 634-21-9, Ethyl red 952-23-8 989-38-8, Rhodamine 6G 1239-45-8, Ethidium bromide 1811-28-5 1837-57-6, 6,9-Diamino-2-ethoxyacridine lactate 2465-27-2, Auramine O 3915-61-5 5409-37-0 7385-67-3, Nile red 7440-18-8D, Ruthenium, dyes 14323-06-9 14806-50-9 16050-67-2 20195-94-2 23570-43-6 48153-94-2 63123-42-2 64339-18-0 69235-50-3 76433-27-7 81650-07-9 88598-43-0 89846-21-9 94564-82-6 107091-89-4, Thiazole orange 116477-15-7 118768-07-3 149264-54-0 151010-68-3 151010-69-4 151010-70-7 151010-71-8 151010-72-9 151010-73-0 151010-74-1 151010-75-2 151010-76-3 151010-77-4 151010-78-5 151010-79-6 151010-80-9 **151010-81-0** **151010-82-1** 151010-84-3 151010-85-4 151010-87-6 151010-88-7 151010-89-8 **151010-91-2** 151010-93-4 151010-95-6 151010-96-7 151010-97-8 151010-98-9 151010-99-0 151011-00-6 151011-01-7 151011-02-8 151011-03-9 151011-04-0 151011-06-2 151011-07-3 151011-09-5 151011-10-8 151011-11-9 151036-31-6 151036-32-7
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(in DNA selective photocleavage with oligonucleotide-dye or oligonucleotide-oxyradical **precursor conjugates**)

L24 ANSWER 16 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1993:576661 HCAPLUS Full-text
DOCUMENT NUMBER: 119:176661
TITLE: Purification of the **precursor** interleukin 1β converting enzyme of human and cloning of cDNAs for the subunits
INVENTOR(S): Howard, Andrew D.; Molineaux, Susan M.; Tocci, Michael J.; Calaycay, Jimmy R.; Miller, Douglas K.
PATENT ASSIGNEE(S): Merck and Co., Inc., USA
SOURCE: Can. Pat. Appl., 173 pp.
CODEN: CPXXEB
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 2076159	A1	19930217	CA 1992-2076159	19920814
CA 2076159	C	20001205		
EP 533350	A1	19930324	EP 1992-307479	19920814
EP 533350	B1	19990526		
R: CH, DE, FR, GB, IT, LI, NL				
JP 05227961	A	19930907	JP 1992-218039	

				199208 17
JP 3136551	B2	20010219		
JP 11069972	A	19990316	JP 1998-196222	199208 17
WO 9400154	A1	19940106	WO 1993-US5687	199306 14
W: AU, BB, BG, BR, CA, CZ, FI, HU, JP, KR, KZ, LK, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9346349	A	19940124	AU 1993-46349	199306 14
EP 648128	A1	19950419	EP 1993-916529	199306 14
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
JP 08500242	T	19960116	JP 1993-502418	199306 14
PRIORITY APPLN. INFO.:			US 1991-746454 A	199108 16
			US 1992-906392 A	199206 24
			JP 1992-218039 A3	199208 17
			WO 1993-US5687 A	199306 14

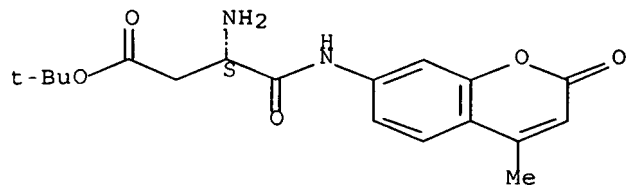
AB Human interleukin 1β-converting enzyme is isolated from monocytes and characterized and cDNAs encoding the 10 and 24 kDA subunits are cloned. and expressed for use in the manufacture of biol. active interleukin 1β and in the detection of the enzyme in the diagnosis of inflammatory disease. The enzyme is useful in the manufacture of interleukin 1β and in the diagnosis of inflammatory disease. The enzyme was purified chromatog. from clarified lysates of human monocytes with the activity followed by assay of cleavage of labeled rabbit interleukin 1β. The purified enzyme was inhibited by thiol alkylating agents and phenanthroline-metal complexes, had a narrow pH optimum (between pH 7 and 8) and was most active at low salt concns. Synthetic assay substrates were developed and used as affinity ligands for purification of the enzyme. CDNAs for the subunits were cloned by PCR and expressed in bacterial yeast and animal systems.

IT **149231-64-1P 149231-74-3P 149231-75-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(preparation and reactions of, in preparation substrate for interleukin 1β-converting enzyme of human monocytes)

RN 149231-64-1 HCAPLUS

CN Butanoic acid, 3-amino-4-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)amino]-4-oxo-, 1,1-dimethylethyl ester, (3S)- (CA INDEX NAME)

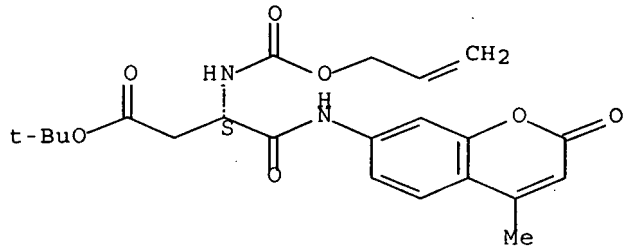
Absolute stereochemistry.



RN 149231-74-3 HCAPLUS

CN Butanoic acid, 4-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)amino]-4-oxo-3-[[(2-propenyloxy)carbonyl]amino]-, 1,1-dimethylethyl ester, (3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

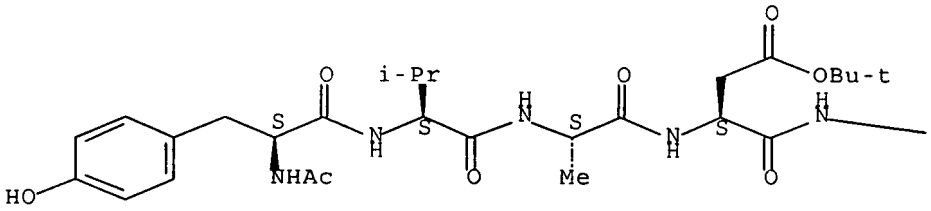


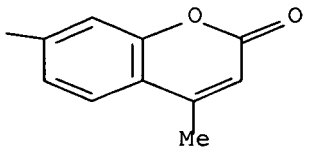
RN 149231-75-4 HCAPLUS

CN L-α-Asparagine, N-acetyl-L-tyrosyl-L-valyl-L-alanyl-N-(4-methyl-2-oxo-2H-1-benzopyran-7-yl)-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

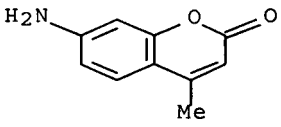
Absolute stereochemistry.

PAGE 1-A





IT **26093-31-2**
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(reactions of, in preparation substrates for interleukin 1β-converting enzyme of human monocytes)
RN 26093-31-2 HCAPLUS
CN 2H-1-Benzopyran-2-one, 7-amino-4-methyl- (CA INDEX NAME)



IC ICM C12N015-57
ICS C12N009-64; C12P021-08; C12N001-21
CC 7-2 (Enzymes)
Section cross-reference(s): 15
IT **149231-64-1P 149231-74-3P 149231-75-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and reactions of, in preparation substrate for interleukin 1β-converting enzyme of human monocytes)
IT 147395-44-6DP, **conjugates** with Sepharose CL-4B
RL: PREP (Preparation)
(preparation of, as affinity ligand for purification of interleukin 1β-converting enzyme of human)
IT 126-81-8 1892-57-5 **26093-31-2** 71849-58-6 143305-35-5 143382-04-1
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(reactions of, in preparation substrates for interleukin 1β-converting enzyme of human monocytes)
IT 122191-40-6, Proteinase, interleukin 1β **precursor**
RL: BIOL (Biological study)
(subunits of, cDNAs for, cloning of, assay of and diagnosis of inflammatory diseases in relation to)

L24 ANSWER 17 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1993:423254 HCAPLUS Full-text
DOCUMENT NUMBER: 119:23254
TITLE: Sensitive, hydrosoluble, macromolecular fluorogenic substrates for human immunodeficiency virus 1 proteinase
AUTHOR(S): Anjuere, Fabienne; Monsigny, Michel; Lelievre, Yves; Mayer, Roger

CORPORATE SOURCE: Cent. Biophys. Mol., Univ. Orleans, Orleans, 45071, Fr.
SOURCE: Biochemical Journal (1993), 291(3), 869-73
CODEN: BIJOAK; ISSN: 0306-3275
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Hydrosol. macromol. fluorogenic substrates specific for the human immunodeficiency virus 1 (HIV-1) proteinase have been prepared The fluoresceinyl peptide Ftc-ε-Ahx-Ser-Phe-Asn-Phe-Pro-Gln-Ile- Thr(Gly)n (Ftc = fluoresceinylthiocarbamyl), corresponding to the first cleavage site of HIV-1 gag-pol native **precursor** was linked to a water-soluble neutral (Lys)n derivative The ε-aminohexanoyl residue (ε-Ahx) and the glycyl sequence were added in order to improve the stability of the substrate and the accessibility of the cleavage site to the HIV-1 proteinase resp. This macromol. peptidic-substrate **conjugate** is significantly more water-soluble than the free peptide itself on a substrate molar concentration basis. The assay is based on the quant. precipitation of the polymeric material by adding propan-2-ol whereas the fluorescent peptide moiety released upon proteolysis remains soluble in the supernatant. The proteinase activity is assessed by measuring the fluorescence of the supernatant. This assay allows the detection of a few fmol of HIV-1 proteinase, even in the presence of cell culture media, plasma or cell lysate and it gives accurate results within a large proteinase concentration range. The hydrosol. macromol. substrate is also suitable for determining the HIV-1 proteinase activity using 96-well microplates, allowing one to test accurately and rapidly numerous enzyme samples and/or the potency of new proteinase inhibitors.

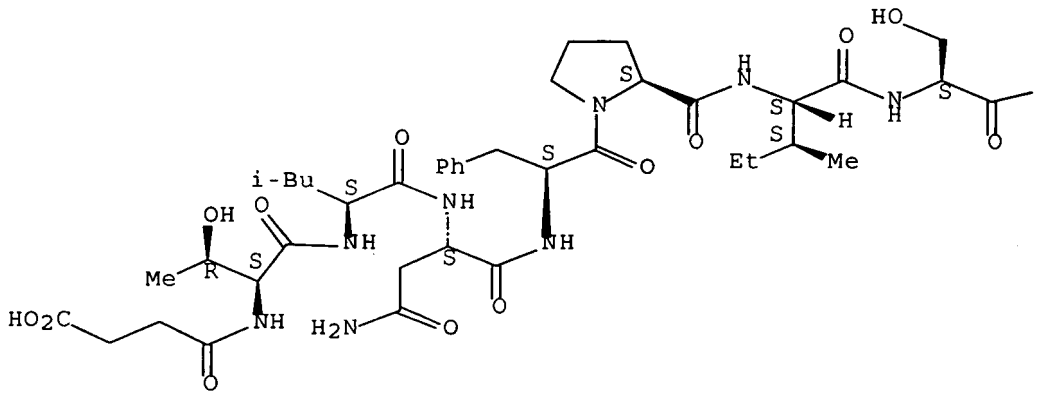
IT **148333-22-6**
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(reaction of, with HIV-1 proteinase, kinetics of)

RN 148333-22-6 HCAPLUS

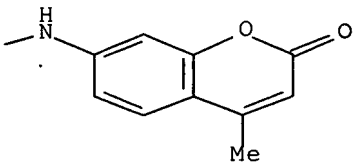
CN L-Serinamide, N-(3-carboxy-1-oxopropyl)-L-threonyl-L-leucyl-L-asparaginyl-L-phenylalanyl-L-prolyl-L-isoleucyl-N-(4-methyl-2-oxo-2H-1-benzopyran-7-yl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



CC 7-1 (Enzymes)
IT 148333-21-5DP, reaction products with gluconoyl and glycyl substituted polylysine
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and **conjugation** with polylysine derivs. of)
IT **148333-22-6**
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(reaction of, with HIV-1 proteinase, kinetics of)

L24 ANSWER 18 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1984:625811 HCAPLUS Full-text
DOCUMENT NUMBER: 101:225811
ORIGINAL REFERENCE NO.: 101:34195a,34198a
TITLE: Activated aryl capped fluorescent compounds, and assay methods and systems using them as fluorogenic **precursors**
INVENTOR(S): Khanna, Pyare L.; Chang, Chiu Chin; Ullman, Edwin F.
PATENT ASSIGNEE(S): Syva Co., USA
SOURCE: Eur. Pat. Appl., 26 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

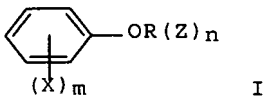
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 110682	A2	19840613	EP 1983-307183	19831124
EP 110682	A3	19860416		
EP 110682	B1	19910821		
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
US 4857455	A	19890815	US 1982-444658	19821126
JP 59106300	A	19840619	JP 1983-219666	19831124
JP 06055158	B	19940727		
AT 66492	T	19910915	AT 1983-307183	19831124
CA 1338608	C	19960924	CA 1983-441882	19831124

PRIORITY APPLN. INFO.: US 1982-444658 A 198211 26

EP 1983-307183 A 198311 24

OTHER SOURCE(S): CASREACT 101:225811; MARPAT 101:225811

GI



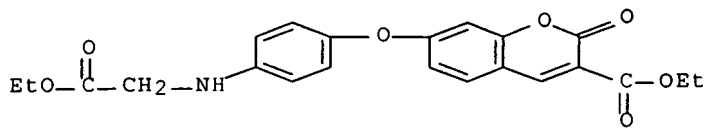
I

AB Capped aromatic fluorogenic substrates such as I (where X = oxy or amino; R = phenolic fluorescent compound selected from 7-hydroxychromenone and 3,6-dihydroxyxanthanes; n = 0-6; and Z = alkyl of 1-3 C atoms or a polar group having 0-6 C atoms and 1-6 heteroatoms) are prepared and used for the determination of peroxidase. The peroxidase is useful as a label for determining a wide variety of analytes by coupling with antibodies. Thus, 3-carboxy-7-(4'- aminophenoxy)coumarin (II) was prepared as a fluorescent substrate for peroxidase. 3-Carboethoxyumbelliferone (10.68 g) in toluene is refluxed for 1 h, NaOH is added to the cooled mixture, and the mixture is heated with refluxing for 1/2 h. The residue, dried under vacuum overnight, is suspended in DMF with anhydrous K carbonate and heated slowly while adding p-fluoronitrobenzene in DMF. Heating near refluxing is carried out for 2 h, addnl. p-fluoronitrobenzene is added, and the reaction is allowed to proceed overnight. The precipitate is collected by filtration, followed by extraction with CH2Cl2, to yield 5.3 g of yellow solid. The solid is purified by silica gel chromatog. using CH2Cl2 as solvent and elution with 5% EtOAc in CH2Cl2 to give 1.25 g carboethoxy-7-(4'-nitrophenoxy)coumarin (III)/m.p. 163°). A 50% aqueous EtOH solution containing III and FeCl2 is gradually heated with addition of concentration HCl in 50% aqueous EtOH. The mixture is refluxed, cooled, diluted with H2O, and extracted with ether. The ether exts. are dried over anhydrous Na2SO4, yielding 18 g of 3-carboethoxy-7-(4'-aminophenoxy)coumarin (m.p. 136-138°). III is dissolved in dioxane, cold 20% H2SO4 is added, and refluxing is carried out overnight. The pH of the solution, after cooling, is adjusted to pH 5, and the resulting precipitate (m.p. 213-214°) is recovered. An assay for poly(ribose phosphate) was developed with peroxidase and antibodies to the poly(ribose phosphate) coupled to it.

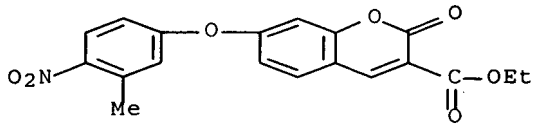
IT **92921-51-2P**
RL: RCT (Reactant); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and hydrolysis of)

RN 92921-51-2 HCAPLUS

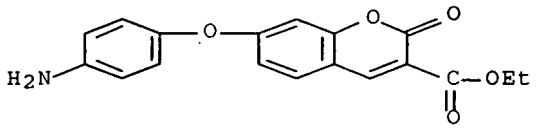
CN 2H-1-Benzopyran-3-carboxylic acid, 7-[4-[(2-ethoxy-2-oxoethyl)amino]phenoxy]-2-oxo-, ethyl ester (CA INDEX NAME)



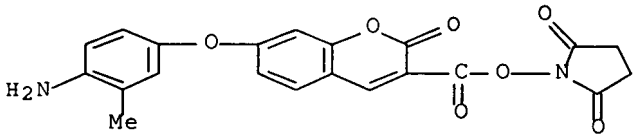
IT **92921-49-8P 92943-78-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and reaction of)
RN 92921-49-8 HCAPLUS
CN 2H-1-Benzopyran-3-carboxylic acid, 7-(3-methyl-4-nitrophenoxy)-2-oxo-, ethyl ester (CA INDEX NAME)



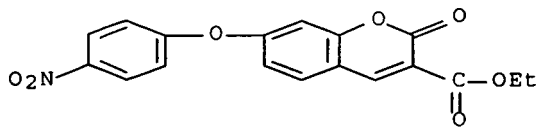
RN 92943-78-7 HCAPLUS
CN 2H-1-Benzopyran-3-carboxylic acid, 7-(4-aminophenoxy)-2-oxo-, ethyl ester (CA INDEX NAME)



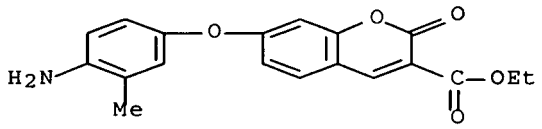
IT **92921-54-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and reaction with aminodeoxyglucose hydrochloride)
RN 92921-54-5 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[[[7-(4-amino-3-methylphenoxy)-2-oxo-2H-1-benzopyran-3-yl]carbonyl]oxy]- (9CI) (CA INDEX NAME)



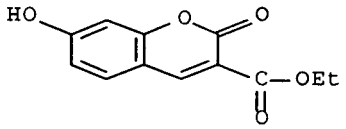
IT **92921-46-5P**
RL: RCT (Reactant); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and reduction of)
RN 92921-46-5 HCAPLUS
CN 2H-1-Benzopyran-3-carboxylic acid, 7-(4-nitrophenoxy)-2-oxo-, ethyl ester (CA INDEX NAME)



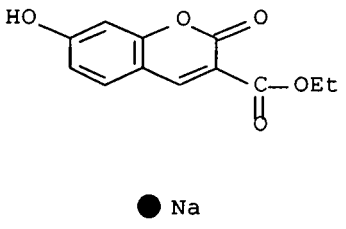
IT **92921-56-7**
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(reaction of, with bromosuccinamide)
RN 92921-56-7 HCAPLUS
CN 2H-1-Benzopyran-3-carboxylic acid, 7-(4-amino-3-methylphenoxy)-2-oxo-, ethyl ester (CA INDEX NAME)



IT **6093-71-6**
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(reaction of, with fluoronitrobenzene)
RN 6093-71-6 HCAPLUS
CN 2H-1-Benzopyran-3-carboxylic acid, 7-hydroxy-2-oxo-, ethyl ester (CA INDEX NAME)



IT **92921-48-7**
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(reaction of, with methylnitrofluorobenzene)
RN 92921-48-7 HCAPLUS
CN 2H-1-Benzopyran-3-carboxylic acid, 7-hydroxy-2-oxo-, ethyl ester, sodium salt (9CI) (CA INDEX NAME)



IC C12Q001-28; G01N033-54; C07D311-16; C07D311-82; C07D493-10
ICI C07D493-10, C07D311-00, C07D307-00

CC 7-3 (Enzymes)
Section cross-reference(s): 9
IT 72657-53-5
RL: ANT (Analyte); ANST (Analytical study)
(determination of, with peroxidase **conjugated** to poly(ribose phosphate) antibody)
IT **92921-51-2P**
RL: RCT (Reactant); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and hydrolysis of)
IT **92921-49-8P 92943-78-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and reaction of)
IT **92921-54-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and reaction with aminodeoxyglucose hydrochloride)
IT **92921-46-5P**
RL: RCT (Reactant); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and reduction of)
IT **92921-56-7**
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(reaction of, with bromosuccinamide)
IT **6093-71-6**
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(reaction of, with fluoronitrobenzene)
IT **92921-48-7**
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(reaction of, with methylnitrofluorobenzene)

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